

A-157

From: Thomas Morgan
 To: Coker, Jeff; Hartos, Dave; Robinson, Mike
 Date: Thu, Dec 12, 2002 2:27 PM
 Subject: Comments on Draft EIS

Mike,

Attached are the Charleston Field Office comments on the Draft EIS documents you sent out earlier this week.

Our comments are contained in the two documents below. One lists the comments for Section II and Table II-3 and the other is a copy of Section IV.D., with our comments contained in strike through and redlines. You'll need to open the Section IV.D. section in order for the redlines to show up.

The comments for Section IV.D. relate to the discussion of the WV AOC+ document. The Draft EIS mis-characterizes the AOC+ document as a fill minimization document when in fact it is an optimization document that simply provides a process to determine the volume of excess spoil and calculates the size of the disposal area for the excess spoil. It creates a "model" minesite, but the operator is not bound by the constraints of the model when completing the final mine plan. The only constraint is that the amount of material backfilled must equal the amount determined not to be excess by the AOC+ process. It does not limit the size or configuration of any particular fill.

A redline is also included with a note about the "case study" site included in the discussion. The use of this particular mine site is misleading in that actual permit reviews generally do not see that great of a reduction in excess spoil volume.

If you have any questions about our comments, let me know. I'll be out of the office tomorrow but will be back in on Monday morning.

Tom

CC: Calhoun, Roger; McCauley, Lynn; Superfesky, Michael



United States Department of the Interior

FISH AND WILDLIFE SERVICE
 446 Neal Street
 Cookeville, TN 38501

December 20, 2002

Ms. Barbara Okorn (3ES30)
 USEPA Region III
 1650 Arch Street
 Philadelphia, Pennsylvania 19103

Dear Ms. Okorn:

We received a letter from Ms. Kathy Hodgkiss, dated November 22, 2002, requesting that we provide you with updated threatened and endangered species information for the Kentucky and Tennessee portion of the Southern Appalachian coal fields. A list of species that may be affected by mining activities is included as an attachment to this letter. Note that our data base is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitat and thus is not necessarily an exhaustive list of each county's endangered and threatened species. Note further that the time frame allotted for this information request was not sufficient for the development of species maps. Please contact us if you would like to further pursue the assimilation of maps.

Measures for protection of aquatic species (i.e., fish, mussels, and snails) focus on the maintenance of water quality. The primary measures are (1) retention of trees along streams in order to provide an energy source and buffer water temperatures and (2) the preclusion of sediment transport to streams.

All of the endangered bat species require protection of wintering habitat (i.e., caves and abandoned mine portals) and food sources, including streams. The Indiana bat, in particular, requires the use of trees as roosting habitat. Standard measures for protection and enhancement of habitat for this species, including maintenance of trees during and after mining, are presently being developed for Kentucky and Tennessee.

Protection of some plants is secured through minimization of the disturbance of specific habitats. For example, riparian species such as Cumberland rosemary and Virginia spiraea require protection of streams and adjacent areas. Adherence to the 100-foot stream buffer zone regulation fulfills these plants' needs. Likewise, maintenance of a buffer zone along sandstone cliffs benefits the species that inhabit those areas (e.g., Cumberland sandwort and white-haired goldenrod).

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We provided information to representatives of the USEPA and Gannett Fleming, Inc., about species of potential concern related to mining in July 1999 and January 2002. Several species listed at those times were deleted from the attached list, or from some counties on the list. For example, the red-cockaded woodpecker is now considered extirpated from Kentucky. Distributions of some of the species included in the July 1999 and January 2002 lists only rarely overlap with areas considered to be within zones of potential mining impact. These species include the bald eagle, shiny pigtoe, birdwing pearly mussel, oyster mussel, fine-rayed pigtoe, pink mucket, cracking pearly mussel, dromedary pearly mussel, clubshell, fanshell, white wartyback, Anthony's river snail, Cumberland elktoe, Eggert's sunflower, Indiana bat, tan riffleshell, slender chub, yellowfin madtom, spotfin chub, and chaffseed. However, some of these species can be vulnerable to impacts in cases where mining and associated activities encroach on them. The pale lilliput and Alabama lamp pearly mussel are no longer considered extant within the area of this biological assessment.

On the other hand, species were also added to certain counties on the attached list. Some were added because of their recent additions to the candidate list, including the Cumberland johnny darter, fluted kidneyshell, and white fringeless orchid. Recent expansion of mining activities into new areas warranted the addition of some species to this list, including the Cumberland bean pearly mussel, green pitcher plant, Sequatchie caddisfly, large-flowered skullcap, and Virginia spiraea. The duskytail darter, tan riffleshell, running buffalo clover, gray bat, and Indiana bat were added to the list because of recent expansions of known distributions into certain areas.

Thank you for this opportunity to provide further input. Please contact David Peiren of my staff at 931/528-6481 (ext. 204) if you have questions about these comments.

Sincerely,

Lee A. Barclay, Ph.D.
Field Supervisor

Attachment



John Forren
12/23/2002 02:58 PM

To: Gary Bryant/R3/USEPA/US@EPA
cc: David Rider/R3/USEPA/US@EPA, Frank Borsuk/R3/USEPA/US@EPA,
Jim Green/R3/USEPA/US@EPA, Kathy
Hodgkiss/R3/USEPA/US@EPA, Margaret
Passmore/R3/USEPA/US@EPA, William
Hoffman/R3/USEPA/US@EPA
Subject: Re: Comments on DRAFT EIS for MTM/VF

Thanks, Gary. We'll get them included in the final version as much as we can.

John

Gary Bryant



Gary Bryant
12/23/02 02:25 PM

To: Kathy Hodgkiss/R3/USEPA/US@EPA, John
Forren/R3/USEPA/US@EPA, David Rider/R3/USEPA/US@EPA,
William Hoffman/R3/USEPA/US@EPA
cc: Frank Borsuk/R3/USEPA/US@EPA, Jim Green/R3/USEPA/US@EPA,
Margaret Passmore/R3/USEPA/US@EPA
Subject: Comments on DRAFT EIS for MTM/VF

The attached file has our comments on reviewing the Dec 2002 Interim Draft report *Mountaintop Mining/Valley Fill Environmental Impact Statement*. Please contact me if there are questions.

Thanks,
Gary



EISDRAFTcmts.wpc

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COMMENTS ON THE DRAFT EIS FOR MTM/VF COAL MINING (Dec 2002)
from ESD, OEP, Wheeling Staff 12/20/02

The body of the report has excellent scientific information on the environmental impacts of MTM/VF mining. Unfortunately, it appears that information was not used in developing the Alternatives. It is not clear why Alternative 2 is the preferred alternative when the only major difference among the three alternatives seems to be which agency leads the permit process. The summary of the alternatives listed on pages ES-2 and 3 states that cross-program actions minimizing adverse effects of mountaintop mining and valley fill construction on terrestrial resources and the public are identical in Alternatives 1, 2 and 3.

A proposed implementation schedule should be included in this report for the key actions like establishing interagency MOUs along with recommendations of how they would be funded. This is one lesson that should be gleaned from effort to draft this EIS.

The fill inventory data base, which was used to estimate the miles of stream impacted, does not support precise determinations. There is a comment on page 3K-22 "A total of 4,484 (67 percent) valley fills out of the 6,607 approved were constructed or may be constructed." Since there is no indication of which fills were built, and only 67% of the fills permitted are actually built, this is very imprecise data, a fact not adequately mentioned in the estimates of miles of streams impacted.

Pg ES-7 - 1st paragraph - "These regulatory changes resulted in a decline in the average number of fills per year approved in the EIS study area"

COMMENT: This is not an accurate statement as there are many factors, in addition to the changes in regulations, at work in determining the number of fills per year - especially the cyclical market for coal.

Near the middle of this same paragraph there appears to be an error in the total stream miles impacted during 1995-1998 (63 miles) and during 1999-2001 (30 miles). Table III.K-8 on page III.K-49 would indicate that there were 206.74 miles of streams impacted during 1995-1998 and 107.26 miles of streams impacted during 1999-2001.

Near the end of that paragraph there is a sentence "Similar environmental benefits are expected with the implementation of one of the three action alternatives proposed in the EIS."

COMMENT: The scientific information in the main report does not indicate that MTM/VF mining produces any environmental benefits, but in fact the impacts are detrimental to the environment. It is more accurate to say that the implementation of one of these alternatives will reduce the detrimental environmental impacts of MTM/VF mining.

Pg II-76 - 1st paragraph - "None of the regulatory authorities in the study area. Including the OSM federal program in Tennessee, specify a preferential method for doing the flood analysis."

COMMENT: This conflicts with the statements on Pg III.G-9 2nd paragraph which indicate that KY & WV have preferred methods for analyzing peak flow and flooding potential.

Pg III.D-6 - 3rd paragraph - "Selenium concentrations from the Filled category sites were found to exceed the AWQC for selenium at all sites in this category."

COMMENT: This statement is in error; the statement in the Stream Report was that all the excessive values were at Filled sites. There are some Filled sites that do not have excessive

concentrations of selenium so the existing statement in this DRAFT report should state "... at most sites in this category."

Pg III.D-7 - 3rd paragraph - "In the USEPA (2002a) stream chemistry study, selenium was found to exceed AWQC at Filled sites only, and was found to exceed AWQC at all Filled sites included in the study."

COMMENT: This statement is in error, as noted in the previous comment. The statement should read "... exceed AWQC at most Filled sites ..."

Pg III.D-7 - 4th paragraph - "While changes in water chemistry downstream from mined, filled sites have been identified, it is not known if these changes are resulting in alterations to the downstream aquatic communities or whether functions performed by the areas downstream areas from mined, filled sites are being impaired."

COMMENT: This should read, "While changes in water chemistry downstream from filled sites have been identified, it is not known which changes cause the impairment observed in the downstream aquatic communities." EPA's studies and other studies have found that the strongest and most significant correlations are between biological condition and conductivity. We do know that the stream segments downstream of some of the fills are impaired, and we believe the impairments are due to water chemistry changes, based on the strong correlations. Please note that the biological conditions are considered impaired, and they are most strongly correlated with water chemistry changes. Conductivity may be a surrogate for other water quality parameters, that is true. It is also true we don't know the mechanism - why is high conductivity associated with impaired biological condition - for example, others have suggested that the high conductivity inhibits ion regulation - but we don't know. That's what we don't know.

Pg III.G-6 - 3rd paragraph, last sentence - "Again this did not result in any predicted overbank flooding."

Last paragraph last sentence "Again, bank full capacity of the stream channel did not result."

COMMENT: - Bank full flows are generally considered a 2 year storm event. The peak flows calculations in these studies are 10 year storms and 100 year storms. It seems impossible for the streams not to rise far above bank full conditions during these much larger storm events.

Pg IV.C-1 - 5th paragraph "The additional provisions for monitoring and mitigation in Alternatives 1, 2 and 3 will increase the environmental benefit provided for this impact factor as compared to the no action alternative."

COMMENT: This should read, "The additional provisions for monitoring and mitigation in Alternatives 1, 2 and 3 will reduce this environmental impact as compared to the no action alternative."

Pg IV.C-2 - Last paragraph, last sentence - "However, the additional provisions for monitoring and mitigation will increase the environmental benefit provided for this impact factor as compared to the no action alternative."

COMMENT: This should read, "However, the additional provisions for monitoring and mitigation will decrease the environmental impact as compared to the no action alternative."

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Kathy Hodgkiss
12/30/2002 08:36 AM

To: foran.john@epa.gov, hoffman.william@epa.gov, David Riden/R3/USEPA/US@EPA
cc:
Subject: Comments on DRAFT EIS for MTM/VF

Kathy Hodgkiss, Acting Director
Environmental Services Division
U.S. EPA Region 3
215/814-3151

--- Forwarded by Kathy Hodgkiss/R3/USEPA/US on 12/30/02 08:39 AM ---



Ray George
12/29/02 01:37 PM

To: Kathy Hodgkiss/R3/USEPA/US@EPA
cc:
Subject: Comments on DRAFT EIS for MTM/VF

Kathy...I have reviewed Gary and the Wheeling ESD staff comments and browsed through the critical areas of the EIS CD. I concur with the expressed concerns. The CRITICAL component however is that the "draft" maintains the good science findings data. Even though these science findings are not reflected in conclusions/recommendations, this data provides the basis for legitimate challenge down the road. Current external agencies crafting may result in an ignore of solid data, however embodiment of the raw science data will ensure the record and allow future interpretation...

Ray George USEPA
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Wheeling, WV 26003

WV/WPa State Liaison Officer

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--- Forwarded by Ray George/R3/USEPA/US on 12/29/02 01:29 PM ---



Gary Bryant
12/23/02 11:25 AM

To: Ray George/R3/USEPA/US@EPA
cc:
Subject: Comments on DRAFT EIS for MTM/VF

FYI

--- Forwarded by Gary Bryant/R3/USEPA/US on 12/23/2002 02:28 PM ---



Gary Bryant
12/23/2002 02:25 PM

To: Kathy Hodgkiss/R3/USEPA/US@EPA, John Foran/R3/USEPA/US@EPA, David Riden/R3/USEPA/US@EPA, William Hoffman/R3/USEPA/US@EPA
cc: Frank Borsuk/R3/USEPA/US@EPA, Jim Green/R3/USEPA/US@EPA, Margaret Passmore/R3/USEPA/US@EPA
Subject: Comments on DRAFT EIS for MTM/VF

The attached file has our comments on reviewing the Dec 2002 interim Draft report Mountaintop Mining/Valley Fill Environmental Impact Statement. Please contact me if there are questions.

Thanks,
Gary



Cindy Tibbott
01/02/03 11:16 AM

To: BWAHLQUI@OSMRE.GOV, CSYLVEST@OSMRE.GOV, dvanadelinda@mail.dep.state.wv.us, foran.john@epamail.epa.gov, hoffman.william@epamail.epa.gov, james.m.Townsend@lr102.usace.army.mil, JOCKER@OSMRE.GOV, jstump@GFNET.com, katherine.L.Trott@hg02.usace.army.mil, MROBINSO@OSMRE.GOV, rhunter@mail.dep.state.wv.us, rider.david@epamail.epa.gov, Suriano.Elaine@epamail.epa.gov, Tom_Bovard@ios.doi.gov, dhartos@escgw.osmre.gov
cc: Dave_Densmore@fws.gov, Diane Bowen/ARL/R9/FWS/DOI@FWS, Marjorie Snyder/R5/FWS/DOI@FWS
Subject: Comments from other FWS offices on draft EIS

As I mentioned on one of our conference calls last week, we've received comments from two of our FWS field offices. It is noteworthy that independent review of the DEIS by these "fresh eyes" led them to many of the same conclusions and concerns Densmore and I have already raised, as have others on the Steering Committee.....

From Dave Pelren of our Cookeville, TN, field office:

I have quickly reviewed the draft Mountaintop Mining EIS. Given the short review time for this draft, we in the Tennessee Field Office have very few comments. We would like to offer an observation or two at this point.

Although the Corps of Engineers' recent approach to minimizing stream impacts is commendable in terms of initiating a stream avoidance/mitigation process, some problems remain. This EIS should discuss those problems. The proposed Corps' process would emphasize placement of fill in previously impaired streams, thereby negating potential for the future improvement of those streams. Considering the situation in eastern Kentucky, where multiple entities often own the land within one mining permit boundary, this system of prioritizing hollows for proposed fill is unjust. However, we concur with the use of this prioritization system in cases where fill is placed in a watershed that is already irreparably damaged.

Cumulative impacts are a critical concern regarding mining and stream impacts. This EIS does not appear to adequately discuss the current lack of a cumulative impact assessment and potential solutions. We recommend that conduct of a comprehensive assessment of downstream invertebrate resources be required to establish a baseline prior to timber removal in all cases where instream fill is proposed. A realistic method of achieving this and appropriate means of mitigating cumulative impacts should be addressed by the EIS.

Section IV.G. (Deforestation) of the EIS includes a discussion of forest as possibly containing the highest environmental value of many mining areas. Although we agree with this sentiment, it does not appear to be consistent with the regulatory situation in many areas of Kentucky and Tennessee in terms of the perception of post-mining land use. The EIS indicates that landowners would be expected to support reforestation because of its long-term benefits. Because of the lack of success of the reforestation initiative that was begun several years ago in Kentucky, we do not believe landowners or the mining industry will show significant support for anything more than is required. The EIS should only

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provide realistic potential solutions.

The projected forest cover conditions for various states should be further explained. The time frames used for projections and quality of forest cover in the EIS is not clear.

Thank you for this opportunity to review the latest draft of the Mountaintop Mining EIS.

David Peiren

From Brian Evans of our Southwest Virginia Field Office:

The Service is correct when it "suggested", as stated on page II-11, that valley fills in streams are contrary to EPA's anti-degradation policy. It appears EPA is disregarding portions of drainage networks to make anti-degradation policy harmonious with valley fills. Why does EPA consider "...anti-degradation principals intact if the overall integrity of the watershed downstream is intact"? EPA does not explain why upstream portions of watersheds isolated and therefore degraded by filled stream segments are not considered as part of anti-degradation policy. Moreover, shifting the emphasis on protection to the broad scale "general integrity of the watershed" obviates protection of smaller streams or stream reaches, which are Waters of the U.S. The potential to restore streams or mitigate stream impacts, such that pre-impact uses are attained has not been demonstrated. It is unlikely that streams and the ecological functions they contribute to the watershed can be replaced through mitigation, nor is it likely that a no net loss of streams policy could be implemented in a manner similar to wetland compensation. Even if EPA restricts consideration of impacts to the reach of stream below the filled reach, studies described in section III.D show that fills contribute to significant degradation to the overall chemical, physical, and biological integrity of adjacent waters. For example, below fills the ambient water quality criterion for selenium concentration is exceeded consistently, natural flow regimes are altered, and macroinvertebrate diversity is depressed.

From Gale Heffinger, Southwest Virginia Field Office:

The discussion at b.2. disregards FWS suggestion the all headwater streams could be identified generally unsuitable for valley fills primarily because it would be at odds with the NEPA requirement that alternative be reasonable. The narrative discussion includes "The ADID process was developed to identify particularly sensitive or high value aquatic resources". This statement implies headwater streams in mining areas are not sensitive or high value aquatic resources. To the contrary, all waters of the US are sensitive and high value aquatic resources, otherwise the Congress through the CWA would have designated certain waters as not sensitive or high value aquatic resources. The CWA objective is to restore and maintain the chemical, physical and biological integrity of the Nation's waters. Additionally Virginia State Water Control Law states all high quality waters will be protected and all other state waters restored to such condition of quality that any such waters will permit all reasonable public uses..... Specific sections of the CWA address identification of waters not meeting minimum water quality standards (303d) but nowhere does the CWA designate or otherwise identify certain waters that are not sensitive and high value aquatic resources. This exclusion of a list of waters that are not considered sensitive or of high value reinforces the objective of the CWA, the State's laws and in effect indicates Congress recognized all waters are sensitive and of high value. Any finding of ADID or CHIA or any other tool to assess water quality would have two conclusions

1) the waters subject to the ADID or other assessment process are impaired and therefore should be restored and maintained per the objective of the CWA. 2) the waters are not impaired and therefore should be maintained per the objective of the CWA. Filling waters of the US with mine waste irreparably degrades the chemical, physical and biological integrity of the waters and permanently disposes such waters to be contrary to the objectives of the CWA, specifically, restoration. Such action as filling streams not only insures the stream cannot be restored, it also causes loss of the biological integrity of the waters downstream because the energy inputs from upstream (the stream now under fill) are disrupted. The action of filling and disrupting the energy flow from upstream to downstream users adversely impacts the biological community including federal trust aquatic resources.

abThe discussion at b.3. includes narrative that states "...not all headwater streams are special; 404(b)(1) will most likely lead to avoidance of truly special sites; and the legal vulnerability of such a designation or use of presumptions". Again, the CWA does not include listing certain streams as "not special" not sensitive or not high quality. This is done for several reasons among which are the objective of the CWA to maintain and restore the chemical, physical and biological integrity..... This in effect states that Congress recognized certain waters are or may be impaired by various causes, however remedies for the impairment (maintain and restore) are set forth in the CWA. Section 303d of the CWA, for instance, mandates the EPA or States to identify impaired streams and include them in the TMDL list and water quality standards planning. Section 401 requires a statement that a National Pollutant Discharge Elimination System permit (section 402 CWA) will not cause a violation of water quality standards. Section 402 requires all discharges be permitted, another tool to restore and maintain. State and federal programs expend dollars to restore streams through such programs as CRP, CREP, WHIP, PFFW and more.

From: <Forren.John@epamail.epa.gov>
To: Cindy Tibbott <cindy_tibbott@fws.gov>, "Dave Densmore (E-mail)" <dave_densmore@fws.gov>, <Rider.David@epamail.epa.gov>, Dave Hartos <dhartos@osmre.gov>, Dave Vandelinde <dvandelinde@mail.dep.state.wv.us>, <Suriano.Elaine@epamail.epa.gov>, Russ Hunter <hunter@mail.dep.state.wv.us>, "Jim Townsend (E-mail)" <james.m.Townsend@hrl02.usace.army.mil>, "Jeff Coker (E-mail)" <jcoker@osmre.gov>, "Kathy Troit (E-mail)" <katherine.L.Troit@hq02.usace.army.mil>, Les Vincent <lsv@mme.state.va.us>, Mike Robinson <mrobinso@osmre.gov>, Paul Rothman <paul.rothman@mail.state.ky.us>, <Hoffman.William@epamail.epa.gov>, "Stump, Jennifer M." <jstump@GFNET.com>, <Hodgkiss.Kathy@epamail.epa.gov>
Date: Thu, Jan 2, 2003 12:49 PM
Subject: EPA-OGC NEPA comments on MTM/VF EIS

FYI

----- Forwarded by John Forren/R3/USEPA/US on 01/02/03 12:51 PM -----

James Havard

To: John Forren/R3/USEPA/US@EPA

01/02/03 12:41 PM cc: David Rider/R3/USEPA/US@EPA, Kathy Hodgkiss/R3/USEPA/US@EPA, Marilyn Kuray/DC/USEPA/US@EPA, Pamela Lazos/R3/USEPA/US@EPA, Steven Neugeboren/DC/USEPA/US@EPA, William Hoffman/R3/USEPA/US@EPA, Gregory Peck/DC/USEPA/US@EPA, Elaine Suriano/DC/USEPA/US@EPA
Subject: OGC NEPA comments on MTM/VF EIS(Document link:
John Forren)

Here are comments from me and Marilyn Kuray. We both plan to be on the 1:30 call.

(See attached file: OGC NEPA Comments on draft EIS 12-02.wpd)

Attachment(s):
Attachment File 1.wpd
Attachment File 2.822

Privileged and Confidential

EPA OGC NEPA Comments on MTM/VF EIS

General

These general comment apply throughout the document. While we provide some examples of where the issues arise in the detailed comments below, we do seek to identify each time these issues arise.

1. The document as a whole is confusing and difficult to read.
2. Many grammatical errors/typos
3. Many times statements are phrased in a negative or defensive manner which weakens the document.
For example: (Alternatives chapter A.1 paragraph 3)
Some individual actions were considered to be similar to or addressed by other actions and were therefore dismissed.

Would be better written as:
Some individual actions were determined to be similar to or addressed by other actions and, therefore, were eliminated from detailed study.
4. It is not clear what the reference point for comparison is. Is it 1998 or 2002? This seems to make a huge difference as many actions have been taken in the intervening years that address the same issues.
5. Do the Agencies all consider this an EIS required under NEPA. Or do the Agencies want to spin this as a voluntary EIS? If it is a voluntary EIS (even though done under a settlement agreement), we would want to make changes to reflect that. Even if we consider this voluntary, we'd still want to follow the regs and statutes to get the most benefit out of doing preparing it. [Note: EPA does not appear to be engaging in an action here for which NEPA compliance would be required.]
6. CEQ regs at 1502.14(c) require agencies to include reasonable alternatives not within the jurisdiction of the lead agency. Further, CEQ guidance provides:

An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. Section 1506.2(d). Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. Section 1500.1(a).

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In addition, CEQ guidance states: "A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered."

Therefore, it is important that we don't say lack of authority is our only reason for not considering alternatives in detail. We should include other reasons why alternatives are not reasonable.

7. The use of "will" throughout the document causes confusion. It gives the impression that particular actions are going to happen. Better wording would be "If this alternative were adopted, it would..." or "Under this alternative, COE would..."
8. In several places the document acknowledged that the Agencies do not have important information. It is important to keep in mind CEQ reg 1502.22 regarding incomplete or unavailable information. That provision says that if incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the Agencies must include this information in the EIS. If the costs are exorbitant, 1502.22(b) provides specific procedures to be followed.
9. It's not clear whether there would be NEPA review on subsequent actions. For example if the agencies enter into an MOU, would that be subject to NEPA review?. Also, some may argue that it is difficult to assess the alternatives without seeing drafts of the implementing MOUs, etc.

Executive Summary

10. The Executive Summary does not explain why Alternative #2 is preferred.
11. If there were regulatory changes instituted following the Bragg settlement, will the preferred alternative provide more environmental protection or is it providing the same level of protection? The term "regulatory changes" sounds like agencies already promulgated rules in this area. If this is true, the EIS needs to explain how the changes being considered with this EIS are different.

I. Purpose and Need

12. Section C. 2.d.4.
"Many of the efforts in this so-called "interim permitting" period identified areas where the agencies, the regulated community, and the environment would benefit from coordinated or clarified procedures, better baseline data collection, improved analysis of potential impacts, and a different sequence of processes."

The meaning of the term "interim permitting" period" is not clear. Does it refer to permitting as done under the Bragg settlement, the interim guidelines or under the

MOU?

13. Section C. 3.b.1
"Some studies completed allow conclusions to be drawn and others suggest more in-depth information is required."

What does this sentence mean? Should it be "Some completed studies ... This sentence needs an explanation of what studies allowed conclusions to be drawn and what additional information is needed.

II. Alternatives

14. Section A (First paragraph)
In accordance with the National Environmental Policy Act, significant issues identified in the scoping process must be evaluated to determine the proper focus of in the EIS. In focusing the EIS, the action agencies must be direct their efforts to those Significant issues are those that (1) relate to the purpose and need of the EIS, and (2) are truly "significant" or important to the decisions being made. [Also, where does this definition of "significant" come from? Do we have a cite?]
15. Section A.1 (intro, paragraph 2)
Pursuant to NEPA, "values" are defined as aesthetic, historical, cultural, economic, social, and health considerations relevant to the proposed action and the alternatives.

Do you mean impacts? Neither NEPA nor the CEQ regs define values.
16. Section A.1 (intro, paragraph 3)
This paragraph suggests that we considered other alternatives, but they are not discussed in the EIS because they were "similar to or addressed by other actions and were therefore dismissed." The CEQ regs state that during scoping the agency should "identify and eliminate from detailed study issues [that] . . . have been covered by prior environmental review." (40 C.F.R. 1501.7(3)) If an issue already has been subject to an environmental review, we should state what that issue is and how it was addressed.

It's unclear what is meant by "actions" does it mean alternatives? or issues?
17. Section A.3.k.
This section says that EPA is writing a BA under the ESA. What is EPA's relevant action under the ESA? What about other Agencies? Will they consult on subsequent actions?
18. Section A.3.l.
Make the following change: "NEPA Section 102(2)(B) requires federal agencies to "identify and develop methods and procedures, in consultation with [CEQ] which will insure that presently unquantified environmental amenities and values may be given

appropriate consideration in decision making..." And then we should discuss what procedures are already in place. Alternatively, we could strike the reference to this section. This section reads as a requirement to develop procedures.

B.2 Fill Restriction Alternatives

19. It is not clear why we rejected an alternative that was not a bright line. We need a reason other than a lack of authority.

B.2.a.

20. Citations to court cases should include the complete citation. For example *District Court: 452 F. Supp. 327 (1978); U.S. Court of Appeals: 627 F.2d 1346 (1980)* should be:
In re Surface Min. Regulation Litigation, 452 F.Supp. 327 (D.C.D.C.,1978), aff'd in part, rev'd in part, 627 F.2d 1346, (D.C.Cir. May 02, 1980)
21. Reasonableness of alternatives - the CEQ regs say that an EIS must consider all reasonable alternatives. It is not necessarily true that the regs prohibit consideration of other alternatives - if an alternative is not reasonable, just say it was eliminated from detailed study because it was not reasonable rather than saying such alternatives would violate the CEQ regs.
22. The EIS must explain why this alternative was unreasonable in terms other than conflict with federal law and/or lack of authority.
23. The paragraph beginning "However, it is OSM's position that, should the CWA contain such a prohibition or bright-line standard. . . ." is very difficult to follow.

In that paragraph, the following sentence should be explained.. Why is this so? "OSM and the state SMCRA authorities historically did not apply the stream buffer zone rule to the area of stream disturbance beneath the fill, but to the downstream effects, offsite."

B.2.b.1 and B.2.b.2

24. Neither section adequately describes why the alternative is unreasonable. The paragraph beginning "Further, EPA and the COE concluded that the general application of ADID to class of streams (i.e., headwater streams) would be somewhat arbitrary and difficult to administer . . ." is a start and should be made clearer and a similar analysis could be used for other alternatives.

B.2.b.3

25. Is the part of this section that begins with "In summary an alternative framework..." a summary of just this subsection? If it is meant to be a summary of all of section 2b, then it needs to be in a separate subsection.

C. Alternatives Carried Forward...

26. (paragraph 1) It is not clear whether the 3 alternatives are significantly different from the status quo. I think you mean that the proposed alternatives would maintain the environmental benefits that resulted from the regulatory changes made as a result of the Bragg settlement. What happens to the regulatory changes? This makes it sound like they will go away.
27. If 1998 is not the baseline for the "no action" alternative, why is it discussed here? Wouldn't going back to the way programs were operated in 1998 be an alternative that was eliminated because it is not viable? This discussion belongs in section B on rejected alternatives.

C.2 No Action Alternative

28. In the summary of regulatory benefits, I don't see any real summary of the benefits. Are there any? If not, we should say that this alternative does not provide any regulatory benefits. Does the Bragg settlement only apply in WVA?
29. In the summary of environmental benefits, the first paragraph needs a topic sentence to lead into all of the statistics. You could reword the last sentence to use as a topic sentence (leaving the last sentence in place).

Alternatives 1, 2, and 3

30. We find it confusing as to why under Alt 1 valley fills are presumed to have significant impacts, under Alt. 3 they are assumed not to and under Alt 2 they may or may not have significant impacts. Do the impacts really change depending on the Alternative? How can we justify this?

D. Detailed Analysis

31. Why is the 1998 process discussed as if it were an alternative we are considering? Since it is not, discussion here is unnecessary and confusing.
32. Definitions of Stream Characteristics - Are Alts 1, 2, and 3 the same? Shouldn't that be stated?
33. We did not see any discussion of why Alternative 2 is the preferred alternative. Since so many aspects of the 3 alternatives are the same, there should be some discussion of why one is better than the others. Otherwise, there is no "clear basis for choice among the options."
34. D.3. Direct Stream Loss

The following two sentences seem like a non sequitur:

"Both SMCRA and CWA place a high value on stream protection, but both of these programs recognize that incursions and disturbances of streams may be unavoidable. For example, there have been hundreds of miles of headwater stream buried by valley fills in the past decade in this EIS study area."

Is this information essential to a reasoned choice among alternatives? See 1502.22. If it is, we need to get this information if the costs are not exorbitant. If they are exorbitant, see the procedures of 1502.22(b).

35. D.7.c Action 19.
This action would create a rebuttable presumption that at least one headwater stream in a system must be preserved or reconstructed. Didn't we reject rebuttable presumptions for all streams under b.3? It is not clear why such a presumption is reasonable here and couldn't be reasonable under b.3.
36. D.9. Air quality -- Someone from OGC ARLO should review this section.
37. D.11. Species.
Make the following change:
Section 1502.25(a) of the CEQ regs NEPA requires, to the fullest extent possible, that an EIS be prepared concurrent with the consultation and coordination requirements of the ESA.
38. D.11. Action 25. Shouldn't this action only apply to EPA where we have an action requiring ESA compliance?

III. Affected Environment

39. III.D.1.f.2. This summary notes that:

"While changes in water chemistry downstream from mined, filled sites have been identified, it is not known if these changes are resulting in alterations to the downstream aquatic communities or whether functions performed by the areas downstream areas from mined, filled sites are being impaired. Further evaluation of stream chemistry and further investigation into the linkage between stream chemistry and stream biotic community structure and function are needed to address the existing data gaps."

Is this information essential to a reasoned choice among alternatives? See 1502.22. If it is, we need to get this information if the costs are not exorbitant. If they are exorbitant, see the procedures of 1502.22(b).

IV Environmental Consequences

40. B.2. Notes: "There is a lack of information on the degree to which length of stream directly correlates with the amount of energy in the form of fine-particle organic material or coarse-particle organic material leaving a particular reach of headwater stream." This section also notes: "Few conclusions regarding level of environmental impacts expected among Alternatives 1, 2 and 3 can be made for this impact factor."

1113

Steven Neugeboren To: srusak@enrd.usdoj.gov, ryoung@enrd.usdoj.gov
01/07/03 03:39 PM cc:
Subject: MTM legal issues

fyi - here are the legal comments I've provided on the draft EIS.

----- Forwarded by Steven Neugeboren/DC/USEPA/US on 01/07/2003 03:38 PM -----

Steven Neugeboren To: csylvest@osmre.gov, pmcdaniel@mail.dep.state.wv.us,
12/31/2002 10:39 AM lance.d.wood@usace.army.mil
cc: John Forren/R3/USEPA/US@EPA, Gregory
Peck/DC/USEPA/US@EPA
Subject: ~~MTM~~ legal issues conference call

Perry, Cheryl and Lance:

I have recently conducted a legal review of ~~the~~ MTM draft EIS under the Clean Water Act (a review under NEPA is being conducted by others in my office). John Forren has scheduled a conference call for this thursday to discuss the issues identified in my review. While I found no fatal flaws in my review, I raised concerns that some of the discussion in the document gave rise to legal concerns, principally: 1) legal vulnerabilities of the 404 program, in particular Corps NWP authorizations, resulting from the characterization of the program as it was administered in 1998; (2) potential legal vulnerability for the new fill rule caused by some of the discussion of past permitting practice ~~for~~ fills which is inconsistent with statements by agency administrators in the preamble to the fill rule that it was generally consistent with past practice; (3) legal difficulty with the discussion of the relationship between the section 404 program and antidegradation requirements; (4) accuracy of various characterization of CWA programs and requirements.

Attached below are my comments. If you'd like to discuss prior to the conference call, you can reach me at 202-564-5488.



MTM EIS comments final.w

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OGC water law office comments on mountaintop mining EIS 12/26/02

Executive Summary:

I found this discussion, like some other sections of the document, somewhat difficult to follow. The use of terms of art, etc. assumes a fair amount of knowledge of the programs by the reader. I would suggest an effort be made to put the discussion more into plain english. Also, in general, the organization of the document was somewhat difficult to follow, e.g., the interspersal of various "alternatives" and "actions." I would suggest more thought be given to how to explain to the reader the relationship between alternatives and actions, etc. up front and in the various sections.

Section I.E - Need for proposed action

I am concerned that this section discusses several longstanding critical legal issues that have been controversial under both SMCRA and the CWA for sometime (e.g., the meaning of the stream buffer zone rule and the relationship between the 404 program and antidegradation). It's unclear to me why we would want to, or need to, tee up those difficult issues, since they will only engender public comments that the agencies will need to address. It seemed like the basic point we are trying to make is that there has been some regulatory uncertainty and we could make that point with a more general discussion without getting into these legal issues. At a minimum, I strongly recommend deleting the entire third paragraph that discusses the CWA. We anticipate seeing the fill rule being subject to litigation, and some might seek to argue that the discussion in this draft is inconsistent with statements in that rulemaking.

Some of the discussion (i.e., the fourth to last paragraph) would strongly support the conclusion that existing permitting decisions have not been adequate, so that language should be modified or deleted. This is a consistent problem I found throughout the document, particularly regarding the pre-1999 practice but also in other respects as well. I assume we don't want the EIS to enhance the legal vulnerability of corps authorizations past and present.

Section II.B - Alternatives considered but not analyzed in detail

p. 10 - There are fairly sweeping legal conclusions here that the stream buffer zone rule could not be used to determine allowable stream segments for filling because doing so would supercede the CWA, something congress precluded in SMCRA. The lawyers need to look at this more closely. I'm uncomfortable with the breadth of this argument and how it is articulated. I sent it to lawyers at DOJ who handled bragg and kentuckians to see if that position is consistent with how we have articulated the relationship between SMCRA and the CWA in litigation.

p. 11 - the discussion identifies the various perspectives of the different agencies in considering and rejecting alternatives (e.g., FWS suggested x alternative, but EPA and the Corps disagreed). I find this odd and based on experience with political leadership in the agency, I think they would view such an approach very unfavorably. I would recommend the discussion simply refer to "the agencies."

EXHIBIT 59

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- the discussion of antidegradation as it relates to valley fills was pretty confusing to me. It obviously touches on a very important and controversial legal issue. A lot of care needs to be given to whether this issue is discussed, and, if so, exactly how to do it so as to not encourage future litigation. My strong recommendation is to delete all reference to this issue in the EIS.

Section b.2. - Advanced Identification

I was uncomfortable with how much of this discussion was presented. See my markup for more detail. In certain respects, the discussion was not accurate; in others, overstated (e.g., I don't see how doing ADID for headwaters streams was on its face at odds with NEPA).

Section b.3 - Special Aquatic Site Designation

It was unclear to me how existing regulations could support designating a new class of special aquatic site. Those are currently listed in the regulation and are an exclusive list; we could certainly add to that list, but doing so would require rulemaking, but that doesn't seem to be contemplated here.

Section II.C.

In general, I found this section fairly confusing and in certain respects an inaccurate characterization of the CWA programs. In contrast, the more detailed discussion in section II.D of the alternatives was more organized and accurate. I think some substantial work would be needed on this section. Alternatively, do you all think that this section adds much that isn't contained in the more detailed discussion in section D. From my vantage point, section C could be deleted entirely and make the document more accessible and accurate in general.

In any case, I suggest an up front explanation of how this section is structured, and why the analysis is organized as it is - e.g., first regulatory framework and process, then discussion of summary of regulatory and environmental benefits. It would be helpful to know why this structure was selected. Are these the criteria that NEPA requires us to evaluate, or a similar explanation.

Section II.C.1 - The regulatory program in 1998

I'm fairly confused as to why the EIS discusses the situation in 1998, since that is not one of the "alternatives." In general, I found the inclusion of that section made it much more difficult to understand the array of alternatives. I'd be interested in discussing why it is in there. If the purpose is to show the improvements that have been made over recent years, perhaps there may be a more effective way to accomplish that.

In any case, as written, much of this discussion appears to suggest (I assume unintentionally) that the program was improperly administered prior to the Bragg settlement, so I would suggest substantial revision to this section.

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Section III.C.3 - Alternative 1:

It's unclear to me what the basis is for making the assumption in this alternative that valley fills are generally more than minimal impact. This is so at odds with current practice, that even suggesting it seems to imply that determining minimal impact is a policy, as opposed to a technical/environmental call. I'd be concerned that this undermines the credibility of the current program's minimal effect determinations. It's also unclear to me how this assumption relates to the fact that the SMCRA determinations will defer to the corps under this alternative.

Section III.C.5 - alternative 3

As with alternative 1, it's unclear to me how the conclusion that valley fills will generally be minimal relate to this alternative, since it ultimately turns on the facts. The document states that it is because the Corps would require compensatory mitigation to make it minimal, but isn't this the case with any alternative, and in any case required by 404(e) itself and the current nationwide permit.

36 - States' SMCRA authority for compensatory mitigation: One critical issue that was not clearly explained was the ability of states to require compensatory mitigation under their statutes. What was unclear was the extent to which OSM intends any new rules to require states to have that authority, and if not, how that would relate to the process at the federal level. My guess based on the draft would be that OSM would not plan to require that states revise their legal authorities to require evaluation of compensatory mitigation. If that's the case, then how exactly would state SMCRA authorities take the lead on those issues? If I guessed wrong, then I think the document needs to make more clear that OSM intends to conduct rulemaking to require states to revise their authorities.

p. 36 - Corps reliance on State SMCRA decisions - The discussion of alternative 3 needs to make sure it's not suggesting that the Corps is not delegating its authority to the SMCRA permitting authority. Some of the discussion could be read as suggesting that. While the corps can certainly rely on information generated by the state, the corps retains ultimate authority for ensuring compliance with 404, and that should be made clear. There is good language on this issue in the fill rule final preamble describing how the corps will rely upon decisions by states, including state SMCRA authorities.

p. 37 - Streamline ESA consultation In the discussion of ESA, I think there is a legal problem with asserting that addressing ESA concerns by the State SMCRA authority would "hopefully eliminate possibly redundant FWS consultation with the corps on the 404 permit. This would be true if the smcra proceeding eliminated all effects to species, beneficial or detrimental. However, if there were any possible effect remaining on the species, I think the corps obligation to consult would remain. Suggest changing the wording to say it would "streamline" any consultation that may be needed by the corps.

P. 40 - Action 1.1- individual permits for valley fills - this action states that the corps will issue individual permits. As stated previously, there needs to be a factual, and not just a policy basis, for such a conclusion, and it doesn't seem "reasonable" to suggest that all valley fills pose more than minimal effects, in light of past practice and the individualized nature of such determinations. I think this could, however, be done through modification of NWP, but I imagine that's not what's contemplated.

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Also, the IP process is described, but no mention is made of public comment. Doesn't that need to be mentioned?

P.48 - Inconsistent stream definitions – the draft states that the agencies will look at definitions of waters, including waters of U.S. under the CWA to enhance consistency. Given the ongoing SWANCC rulemaking, that statement and commitment need to be run by political management. I frankly doubt that the agency leadership would want those issues addressed in this context.

P. 51 - Relationship of SMCRA to CWA – the draft states that applying the stream buffer zone rule to prohibit fills would contrary to section 404. This also raises the question whether section 404 constrains DOI's authority, which as noted above is an issue that should be run by DOJ.

Change in practice on fills – draft states that the regulation of direct loss of streams has changed in two ways since 1998, one of which is the fill rule. The fill rulemaking, however, states that it's generally consistent with agency practice, so this language in the draft should be struck.

Corps practice under prior NWP – The draft also states that the new NWP 21 requires project by project determinations of impacts and appropriateness of an IP. While I realize the corps might not have been looking closely at projects under the previous NWP, they were still receiving PCNs and, as a legal matter, determining the applicability of 404. I'm concerned that this language could be read by some as suggesting that the corps was not fulfilling its legal obligations by how it was implementing the prior NWP, so it should be revised.

52 - Advanced Identification – ADID does not, as indicated in the draft, change the threshold for impacts or information requirements. It has no regulatory effect whatsoever, but is only information about the likelihood that the guidelines will be met at a future time. The standard for reviewing a permit application at that time is the same for any other proposed discharge. So the language here should be modified accordingly.

P.56 - Region III permit objection policy – There is a discussion of region III's 402 permit objection policy as it relates to valley fills which is some legal concern. We have been very careful in how we have characterized that policy, because of litigation around the issue of whether 402 or 404 covers valley fills. I'm concerned that some of the language could be used to undermine current agency positions, potentially in litigation. My preference would be for it to be dropped. It doesn't seem central to the discussion in this section.

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60 - draft states that siting of fills hasn't been based on most environmentally protective alternative. This statement again could be cited to argue that current authorizations violate section 404, so it should be deleted.

60 - SMCRA authority for fill minimization – there is a statement that SMCRA "appears" to provide statutory authority for requiring fill minimization. I don't think it's appropriate for an EIS to be tentative about one of the agency's statutory authority, especially where that authority is a prerequisite to some of the most important actions considered in the document. The DOI lawyers should be asked to speak to this question so the document can be definitive.

62 - the fill minimization section discussion of the no action alternative only discusses SMCRA. Doesn't it need to also discuss 404?

68 - II.F.7 - Cumulative Impacts - the discussion of the program in 1998 includes a discussion of the relationship between anti-degradation and 404. As stated previously, that is a legally complex and controversial issue, and I don't see any benefit to teeing it up in the EIS process. I strongly recommend its being deleted.

The discussion also contains a background paragraph of basics on the TMDL program. It's entirely unclear why this is being discussed here in this section, and what its relevance is. Suggest either tying it in better or deleting it. It's not clear to me at all why TMDLs would be relevant here (if it is relevant as background, would seem relevant to the document as a whole and not just cumulative impacts).

69 - Action 12 - rebuttable presumption that at least one headwaters stream must be preserved. – I didn't see this very significant proposal discussed elsewhere. This is quite a significant policy proposal, but is discussed only briefly, and the manner in which it would be implemented is not mentioned. I think rulemaking would probably be necessary, so this should be discussed further internally, in particular with OW.

74 - Air Quality - this should be reviewed by an air attorney in region 3 for accuracy

79 - ESA - It is not accurate to say that a biological assessment is needed if species are present; a BA is only required for "major construction activities." I think it's not clear that a BA is required here. Since one is being prepared, I don't think the document needs to be speak to whether it's legally required and language should be changed accordingly.

80 - ESA - the document states that the EIS "cannot" be published until agreement

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is reached with FWS. I suggest changing the language to "will not" - I don't see the ESA as prohibiting proceeding with a programmatic EIS. Rather, we intend to complete the consultation prior to issuing the EIS, so I suggest changing the language accordingly.

Also, the discussion of the regulatory program today in this section for some reason keeps referring to NEPA, as opposed to ESA. Not clear why it's doing that since we're supposed to be discussing endangered species.

SECTION IV - ENVIRONMENTAL CONSEQUENCES

Section A of this section discusses administrative costs far more than environmental consequences. I don't know, but presume that such discussion is warranted under NEPA. As an uneducated observer, the emphasis on cost was notable, and I raise this only to say that I can see outside parties citing this as an example of how the EIS has failed to meaningfully focus on environmental impacts.

A-7 - Inconsistent definitions of stream characteristics

I strongly suggest toning down the repeated discussion of how much confusion there is in the public and regulated community about the programs. Such discussion could be used to challenge permit authorizations and enforcement actions. This is particularly true of the discussion of uncertainty in CWA jurisdiction, which should be deleted.

B-4 Direct Stream Loss - states that "the agencies will formally make an ADID" of watersheds. I assume we mean that we will "consider" making such identifications. Current language should be modified to make that more clear.

D-1 - Fill Minimization - Again, the document states that until 1998 fill minimization wasn't required. Even if true, such statements could be used by outside parties to suggest that those authorizations failed to meet the guidelines, so suggest deleting that.

D-4 - the document states, as it has elsewhere, that we believe AOC + satisfies requirements for alternatives analysis under the guidelines. This is a strong statement. Is OW on board with it and saying it in this public way? Do we think it satisfies alternatives analysis requirements, or just minimization?

D-6 - Discussion of costs - I was very confused by the discussion of costs at the end of this section. It's not clear why we are discussing it, and it is of such a

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Deliberative/predecisional

general nature it didn't strike me as contributing to the discussion in this section in a meaningful way.

G-8 Forestation - The discussion of takings claims is not germane or appropriate, and should be deleted.

H-2 Air Impacts - A very broad and strong statement is made that states' regulation has "not been consistent with the intent of the CAA." Couple concerns - first, states are not required to act in accordance with the "intent" of a statute, only the requirements in it applicable to them. If we believe that states have failed to meet applicable requirements, then I suggest being more precise in where they have failed, and coordinate that position with the air office in the region.

J - Endangered Species - the first page of this section is by far the best and clearest explanation of the 1996 biological opinion. I suggest using this discussion elsewhere in the document where ESA is discussed.

The document states that EPA is preparing a BA. I assume it's doing it on behalf of all the federal agencies. This should be made clear. This similar change should be made in other locations where EPA's preparation of the BA is mentioned.

J-2 - There are many strong and significant statements made that the conditions in the 1996 biological opinion are not being met. If I were OSM, I'd look closely at this. This discussion could be relied upon by outside parties to bring litigation claiming that OSM is required to reinstate consultation.

K - Environmental Justice - The document assumes that preparation of this EIS is an action covered by the EO. Are we sure that's the case? I have sent the discussion to the EJ lawyer in OGC to review.

A-148

From: Mike Robinson
 To: "Cindy.Tibbott@fws.gov".ESCGW.ISMESC;
 "Dave_Densmore@fws.gov".ESCGW.ISMESC; "dvandelinde@mail.dep.state.wv.us".ESCGW.ISMESC;
 "Forren.John@epamail.epa.gov".ESCGW.ISMESC;
 "Hoffman.William@epamail.epa.gov".ESCGW.ISMESC;
 "James.M.Townsend@LRL02.usace.army.mil".ESCGW.ISMESC;
 "Peck.Gregory@epamail.epa.gov".ESCGW.ISMESC; Hartos, Dave; RHUNTER.CWVGVW.ISMCVW
 Date: Fri, Jan 10, 2003 3:01 PM
 Subject: RE: H&A economic analysis

Bill, et al--With everything else going on, I've only had time to briefly skim John's report. Apart from some concerns with the draft (read on), my recommendation is that we don't finalize it at this time for inclusion in the DEIS. We just don't have sufficient time to deal with this report--particularly when you consider all the comments on the EIS Chapters that must be addressed in the next two weeks. I don't see that finalizing John's report is a high priority task.

Further, the original purpose of John's report (as agreed upon by the EIS SC), was to provide his mining engineering opinions to the SC on which sensitivity modeling input factors should be evaluated by H&A. These opinions were supposed to be shared with the SC and all stakeholders immediately following the outreach meeting in October and prior to H&A soliciting feedback through interviews. Since the need for John Morgan's report was predicated on this approach, finalizing it now seems unnecessary and the value of his report at this point is likely moot. The draft Morgan report has several inaccuracies regarding the agencies' positions on the earlier reports. It is also incomplete as to detailing all of the issues that the SC identified with respect to inputs, methodology, and assumptions made in evaluating limitations of the RTC study. Finally, the draft report was prepared before several meetings and discussions occurred to design the recent H&A sensitivity study approach. John Morgan was involved in all the discussions of the approach to the H&A sensitivity study. The report does not reflect this involvement or provide a description of the mutual (i.e., SC, John Morgan, and H&A) agreements on what the H&A contract ultimately involved.

In summary, to rectify these concerns would require commitment of resources that we don't have to spare given the current schedule. I propose we focus on revisions of the DEIS for now. The bloom's off the rose at this juncture.

Michael K. Robinson
 Chief, Program Support Division
 Appalachian Regional Coordinating Center
 Office of Surface Mining
 US Department of the Interior
 (412) 937-2882 fax (412) 937-3012
 3 Parkway Center
 Pittsburgh, PA 15220

>>> <Hoffman.William@epamail.epa.gov> 01/07/03 01:34PM >>>

Attached is John Morgan's draft report following the economics meeting that was held in Charleston last October. Please submit comments to my attention ASAP so John can finalize the report. Thanks!

Bill

William J. Hoffman (3ES30)
 Director, Office of Environmental Programs
 Environmental Services Division
 U.S. Environmental Protection Agency
 1650 Arch Street

EXHIBIT 60

Philadelphia, PA 19103-2029
 (215) 814-2995
 -- Forwarded by William Hoffman/R3/USEPA/US on 01/07/03 01:34 PM

John Morgan
 <jmorgan@morganwor
 ldwide.com> To: William Hoffman/R3/USEPA/US@EPA
 cc:
 Subject: RE: H&A economic analysis
 01/07/03 12:56 PM

Bill

Please find attached the draft document.

John

-----Original Message-----

From: Hoffman.William@epamail.epa.gov
 [mailto:Hoffman.William@epamail.epa.gov]
 Sent: Tuesday, January 07, 2003 12:39 PM
 To: John Morgan
 Subject: RE:H&A economic analysis

Jeff brought it up this morning. Sorry for the confusion. If you could send it electronically, it would help me get it out to the rest of the group for comments. Thanks!

William J. Hoffman (3ES30)
 Director, Office of Environmental Programs
 Environmental Services Division
 U.S. Environmental Protection Agency
 1650 Arch Street
 Philadelphia, PA 19103-2029
 (215) 814-2995

John Morgan

<jmorgan@morganwor
 To: William
 Hoffman/R3/USEPA/US@EPA
 ldwide.com> cc:

Subject: RE:H&A
 economic analysis

01/07/03 09:21 AM

Bill,

The draft report was included with our invoice dated November 14, which was addressed to Jeff Alpers. I am not sure who actually received it as I understand Jeff has been reassigned (?).

We have not finalized our report so please give me guidance.

John

-----Original Message-----

From: Hoffman, William [mailto:Hoffman,William@epamail.epa.gov]
Sent: Monday, January 06, 2003 5:22 PM
To: John Morgan
Subject: RE: Fola

Thanks John!

To whom did you send the invoice????

Bill

William J. Hoffman (3ES30)
Director, Office of Environmental Programs
Environmental Services Division
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029
(215) 814-2995

John Morgan

<jmorgan@morganwor To: William
Hoffman/R3/USEPA/US@EPA
ldw@de.com> cc:

Subject: RE: Fola

01/06/03 04:36 PM

Bill

I submitted an initial draft of our report on the Charleston meeting with our invoice for that effort. Since that submission we have made some small changes based on discussions with RTC. I will complete this and send it to you. I noted Mike Robinson's postscript on his email.

John

-----Original Message-----

From: Hoffman, William [mailto:Hoffman,William@epamail.epa.gov]
Sent: Monday, January 06, 2003 10:41 AM
To: John Morgan
Cc: Terry Sammons (E-mail)
Subject: Re: Fola

Thanks John. I have forwarded your message to Rich, Dan, and my Division Director (Kathy Hodgkiss) to find out if these dates work. Did you indicate in your prior message that the COE was about to issue. Please advise. Thanks! I'll get back to you if either of these dates work.

Also- did you ever put together a report on your review of the Phase I and II economics studies following the outreach meeting held in Charleston on 10/17? Please advise. Thanks once again!

Bill

William J. Hoffman (3ES30)
Director, Office of Environmental Programs
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John Morgan

<jmorgan@morganwor To: William
Hoffman/R3/USEPA/US@EPA

ldwide.com> cc: "Terry Sammons
(E-mail)" <Tsamm63816@aol.com>
01/08/03 09:34 AM Subject: Fols

Bill,

I hope you had an enjoyable Christmas, and a Happy New Year to you.

As we discussed before Christmas Terry Sammons and I would like the opportunity to meet with you and your colleagues to outline the final configuration of the Fols 4 permit. This is the permit that we reviewed with you last year and incorporates the innovative stream restoration and landforming.

I am not sure who you would recommend that attends but it might include Rich Kampf and Dan Sweeney.

I would like to propose a meeting date of January 14 or January 23 at your office in Philadelphia.

I look forward to hearing from you.

John

(See attached file: MWCI Analysis of MTR-VF Economics.doc)

DRAFT

Morgan Worldwide Consultants, Inc.
Analysis of MTR/VF EIS Economic Impact Studies
October 22, 2002

Introduction

This letter report prepared by Morgan Worldwide Consultants Inc. (MWCI) is an analysis focused on work completed since 1999 regarding the economic impacts of restrictions on Mountaintop Mining Valley Fill operations in Appalachia. It also addresses the current attempt to essentially disregard this work and replace it with unsubstantiated data to produce different results within the next two months.

Conclusions

RTC, with direction from the EIS Steering Committee, endeavored to estimate the effect of various valley fill restrictions on the quantity of coal potentially available for mining as objectively as possible, going to great lengths to prevent human bias from swaying results one way or another. The results of this unbiased approach are being questioned, and OSM proposes to solicit input from coal industry representatives. MWCI has reviewed the Phase 1 work and determined that it is premature to dismiss the results portrayed in the Final Phase 1 Report.

H&A, with direction from the EIS Steering Committee, used the unbiased results of the RTC Phase 1 Report as input into their econometric models in an effort to predict the regional economic impacts of various valley fill restrictions on regional coal production and coal-derived power generation through 2010. The methodologies and results of the H&A Phase 2 work are not in question, but H&A has been requested by OSM to conduct a sensitivity analysis using input solicited from coal industry representatives. MWCI does not question the integrity of Hill & Associates, Inc., but questions the validity of information supplied by coal industry representatives on such short notice. This is not to say that coal industry representatives will intentionally provide bad information, but that they probably do not have defensible answers to effects on their respective and/or collective MTR reserve base and operating costs.

The original intended use of the Phase 1 and Phase 2 results was to provide input into the Phase 3 work, a much more detailed regional econometric modeling effort conducted by West Virginia University College of Business and Economics. This Phase 3 study has been canceled. MWCI has not determined whether or not this Phase 3 work should be conducted as originally envisioned.

Recommendations

MWCI puts for the following recommendations:

1. Do not pursue the current OSM direction of sensitivity analysis based upon input solicited from coal industry representatives. Instead of throwing out the results of the unbiased approach based on poor comparisons, spend the time and money to qualify and quantify the work accomplished to date. Introducing unsubstantiated data at this point as input into the H&A models is not a sensitivity analysis, but in fact replaces the Phase 1 results. Normally, sensitivity analyses are conducted on an accepted baseline case to show which input parameters affect that baseline case more than other input parameters.
2. Pursue the sensitivity analysis by accepting the work completed to date as the baseline, then quantify the margins of error within the work already completed and use this error analysis as the basis for sensitivity analyses. In fact the 10% ROI or 15% ROI base cases could be selected as the baseline case, with the various percentage reductions in MTR sites representing the most influential of the input parameters. Of these reduction scenarios, error analysis applied to the 75-

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acre restriction probably has the most meaning in sensitivity analysis since it appears to be on the "knife edge" and could go one way or another in terms of Phase 2 output.

3. If OSM and H&A have budgeted for two more model runs, MWCI suggests that the input parameters targeted be:
 - a. The delayed effect of restrictions as opposed to the instantaneous effect currently assumed, using percentage reductions currently in place; and
 - b. Run the model assuming that mountaintop mining effectively halts, along the lines of the tech team study which claimed that 92% of all mountaintop mining would cease as a result of proposed valley fill restrictions. There is very little margin for error in this case, and it would certainly bracket the range of possible outputs. Additional work associated with this scenario is the re-definition of all coal reserves at MTR sites in terms of alternative mining methods.
4. If interviews with coal industry representatives proceeds and the sensitivity analysis is carried out with this input to Phase 2 modeling the following concerns need to be addressed:
 - a. Coal industry representative are not likely to have production reduction, add-back reserves, and effects on economics for their operations that correspond to 250, 150, 75 and 35-acre fill restrictions. They will have a feel for what level of restriction will materially affect their particular situation, and H&A will need to correlate these levels of restrictions to represent a 250, 150, 75 or 35-acre fill.
 - b. Current MTR operations will not experience an instantaneous change in operating costs, but changes to equipment spreads as a result of MTR reductions and mining method selection will have an impact on operating costs.
 - c. Changing too many inputs simultaneously might make it impossible to determine which variable produced the largest impact on model outputs. This requires very careful consideration.
 - d. Before H&A actually runs the models again, present the changes in input to members of the steering committee for review.

Analysis of the Phase 1 Report

RTC prepared the Phase 1 Report under guidance from the EIS Steering Committee regarding methodologies for estimating the Effect of Various Valley Fill Restrictions on the Quantity of Coal Potentially Available for Mining. After this report was published RTC was criticized for its methodologies by some members of the same Steering Committee. These criticisms suggested that:

1. RTC erred in base seam elevations used in the regional GIS database with coal seams identified throughout West Virginia; and
2. RTC overestimated the volume of fill space available upon implementation of various restrictions in valley fill sizes, thus overestimating the residual quantity of coal amenable to MTR mining methods upon implementation of various restrictions in valley fill sizes.

The intent of the RTC approach was twofold:

- Produce a regional GIS database with coal seams identified throughout West Virginia, and combine this database with topographic information to produce a theoretical (virgin state) volume of coal available for mining. From this theoretical volume adjustments would be made to account for coal already mined from the ground, in the process of being mined, and coal reserves made inaccessible due to proximity to incorporated towns, national parks, etc. Remaining theoretical coal reserves would then be subjected to mining engineering parameters to determine amenability to Mountaintop Removal/Valley Fill methods, thus creating a theoretical mountaintop mining reserve base.

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- Produce a regional GIS database with watersheds available to accept excess spoil generated by Mountaintop Removal mining methods. In the unconstrained case no reduction in watershed size was made, i.e. Pre-Judge Hayden ruling, mine permitting practice. Four watershed size constraints were then imposed on these available watersheds; they were 250, 150, 75, and 35-acre limitations. For each of these size constraints RTC estimated the percentage of mountaintop mining coal reserves effectively sterilized due to insufficient valley fill storage capacity. Ergo the coal could be mined economically if there were adequate valley fill capacity available, but a portion of these economic reserves become uneconomic by MTR methods because there is no way to dispose of all the excess spoil.

Theoretical Mountaintop Mining Reserve Base

During the presentation of RTC's Phase 1 results by OSM on October 17, 2002, a slide was shown of a particular location where the RTC regional coal seam approach was compared with West Virginia Geological and Economic Survey (WVGES) detailed information. The differences in basal seam elevations as related to topography was pointed out, implying differences in coal reserves and physiographic features that influence the economics of MTR methods when mining engineering parameters are applied to a coal seam or series of coal seams and associated interburden and/or overburden. This, according to the OSM representative presenting RTC's work, is an illustration of the flawed approach used by RTC to create a theoretical mountaintop mining reserve base.

MWCI is not convinced that a singular example of differences obtained when comparing regionally-derived data with site-specific data is indicative of the entire Phase 1 level of accuracy. Drawing general conclusions from such a specific comparison is poor practice. In the case illustrated by the OSM presenter there may very well be substantive errors one way or another, but the EIS Steering Committee agreed with RTC that on a regional basis, errors of omission will more or less equal errors of commission and the overall integrity of the regionally derived database would serve the purposes of the intended regional analysis.

If OSM and/or RTC wish to qualify the Phase 1 results or quantify the errors inherent to RTC's approach then a statistically valid sampling procedure needs to be implemented. This procedure would certainly encompass more than one or for that matter several, comparisons of regionally-derived data with site-specific data. This statistically derived error would then be the basis for subsequent sensitivity analyses regarding input into the H&A models, rather than introducing unsubstantiated data solicited from coal industry representatives as the basis for sensitivity analyses.

Furthermore, RTC asserts that its methodology has been employed since 1998, when "...an initial series of seam occurrence, thickness, and quality maps were produced. Various geologists and coal operators familiar with coal operations throughout the state reviewed the maps. Interpolation bounds were modified and new data points were added based on these reviews. This data was used to revise the map output. The revised set of maps was subjected to public scrutiny by way of their use for tax assessment purposes. As a result, where appropriate, interpolation bounds have been modified and new data points have been added to again revise and correct map output. This is an annual correction process and has been completed twice." This is another indication that it is premature to dismiss the results portrayed in the Final Phase 1 Report.

Theoretical Valley Fill Capacity

During the same OSM presentation on October 17, a slide was shown of the 150-acre watershed modeling results. The same OSM presenter proceeded to describe how some of the 150-acre watersheds identified by RTC were nonsensical with respect to a watershed by definition and watersheds with respect to consideration as potential valley fill sites. RTC's Phase 1 results indicated that for the 250 and 150-acre size restrictions, less than 10% of the available space is actually required for valley fill. It is unlikely that

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RTC's methodology is so far off that the isolated discrepancies pointed out by the OSM presenter will explain away the remaining 90% of fill space available for valley fill according to RTC.

RTC responded to criticism of their watershed modeling methodology in the letter memorandum from RTC to Mr. Bill Hoffman dated 7/14/02. During OSM's presentation of RTC's results on October 17, 2002 it was pointed out that some of the 150-acre watersheds crossed streams and thus were not valid watersheds by definition. In RTC's 7/14/02 response to this criticism this issue was specifically addressed whereby stream buffers incorporated into the database "...split the fill in two and only that portion that touched the mine would be considered useable." Furthermore, RTC responded to various watershed modeling inconsistencies with regards to regionally-derived data compared with site-specific information. Indeed some watersheds were withdrawn from consideration as valley fills by RTC when conducting this comparison. More importantly, however, was the inclusion of watersheds previously discarded by the same methodology when site-specific information indicated a potential valley fill site had not been identified within the regionally-derived database. Thus the assumption of errors of omission approximating errors of commission on a regional basis was more-or-less validated. MWCI finds it misleading that the OSM described how some of the 150-acre watersheds identified by RTC were nonsensical with respect to a watershed by definition and as potential valley fill sites, without revealing to the audience RTC's response to these criticisms.

Effect of Fill Restrictions on MTR Reserves and Coal Available by Alternative Mining Methods
The estimated effect on mountaintop mining reserves generated by RTC is summarized as follows:

Base case unconstrained (Pre-Judge Hayden) MTR coal reserves:	1,111,223,494 tons
MTR Coal reserves economically mineable with a 250-acre restriction:	919,512,131 tons
MTR Coal reserves economically mineable with a 150-acre restriction:	852,829,517 tons
MTR Coal reserves economically mineable with a 75-acre restriction:	600,324,203 tons
MTR Coal reserves economically mineable with a 35-acre restriction:	252,053,489 tons

These figures represent MTR coal reserve reductions of 17.25%, 23.25%, 45.98%, and 77.32% for the 250, 150, 75, and 35-acre cases respectively. The MTR percentage reduction results were provided to Hill & Associates, Inc. for input into their models. These percentage reductions apply to coal reserves economically mineable by mountaintop mining methods and do not include coal reserves that can be added back in at the mountaintop sites by mining some of the same coal using alternative mining methods. The logic here is that although 17.25% of the coal is no longer recoverable in the 250-acre case by MTR methods (for example), a certain percentage of coal in this 17.25% can still be economically recovered using other mining methods including contour, highwall, auger, and/or deep underground mining methods. Thus an inverse relationship was established at mountaintop mining sites whereby consequential reductions in MTR coal reserves resulted in progressively increasing coal reserves amenable to alternative mining methods at the same sites. This results in the following revised reduction percentages for coal reserves at defined MTR sites:

	Total Reserve (MTR Sites) Tons	Percentage Reduction
Unconstrained	1,942,384,821	0.00%
250-Acre Restriction	1,766,528,993	9.05%
150-Acre Restriction	1,701,937,228	12.38%
75-Acre Restriction	1,481,821,884	23.71%
35-Acre Restriction	1,201,118,213	38.16%

For modeling purposes the reserves no longer available by mountaintop mining but added back in using alternative mining methods were treated by H&A as coal reserves added to the supply database as

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possible new mines, albeit with a two-year delay to account for engineering and permitting. MWCI understands that these percentage reductions apply only to mountaintop mining sites by definition, and coal mining activities elsewhere in the region are not represented here. Other sources of coal throughout the region are included in the H&A proprietary database however, and it is these other sources that will make up for some of the lost production capacity indicated above.

Analysis of the Phase 2 Report

The intent of the Phase 2 Report is to estimate the effect the afore-mentioned valley fill restrictions have on the regional coal mining and coal-fired power generation industries. Hill & Associates, Inc. utilizes a proprietary database consisting of all known current coal producers and suppliers nation-wide, and nation-wide coal reserves still in the ground subject to future exploitation using proven technologies. H&A applies proprietary production cost data from these current coal producers to generate cost curves representing the supply and demand economics of current and future coal mining activities. With such a comprehensive modeling mechanism H&A is comfortable with estimating the effect on supply and demand economics when various inputs to the models are changed. These inputs include, but are not limited to: coal supply from various domestic and foreign producers, environmental controls imposed on coal-fired power generating plants, and rate of return assumptions for capital investment. These inputs are noted in this letter report due to their prominence in the H&A Phase 2 modeling effort. Outputs supplied by H&A modeling, essentially the results of Phase 2, include the following:

- Coal tonnage
- Direct coal employment
- Mine capacity capital expenditures
- Average coal price, fob mine
- Average wholesale price (lambda costs)¹ of electricity
- Megawatt-Hours of generation
- Environmental clean-up equipment capital expenditures for utilities
- Electricity capacity investments by type (construction, equipment, etc.)
- Major coal mining costs by category
- Average U.S. wholesale price (lambda costs) of electricity

In this letter report, and in the context of the EIS study region, we will focus on the results of the first five of these outputs.

Coal Tonnage

As states previously, H&A utilizes comprehensive proprietary databases to estimate the effect certain activities might have on the economics of defined regions. In this case the region includes West Virginia, Eastern Kentucky, and Virginia. One of the things the H&A models are capable of is accounting for substitution if for some reason a coal producer drops out, a coal producers' cost goes up, or the demand for a particular coal type changes. Thus the percentage reductions obtained from the RTC Phase 1 work can be input into the H&A models, and the models are able to estimate increased production from one producer to make up for the decreased production from another producer. This increased production may come from the same region, which is the topic of interest in this case, or it may come from a source outside the region as a response to classic supply and demand economics. Note that the H&A reserve base pertaining to various mining methods is completely different and independent of the RTC tonnage figures used to derive percentage reductions.

¹ In the context of this letter report MWCI assumes that lambda costs is a term describing the cost of the next kilowatt hour that could be produced from dispatchable units on an electric supply system.

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In this fashion H&A is able to take the RTC output which represents effects on coal production from defined MTR sites and estimate the amount of lost production capacity that is made up from the same region. Not all of the lost capacity may be made up from the same region; if for example, it makes better economic sense to import coal from outside the region. The following table shows the cumulative effects on coal produced from 2001 through 2010 of H&A modeling for all sources of coal within the EIS region:

H&A Summary Coal Tonnages	Percentage Reduction	
	Total Tons Years 2001 - 2010	From Base Case
Base Case - 15% ROI	2,261,269,000	0.00%
250-Acre Restriction	2,186,812,000	4.63%
150-Acre Restriction	2,149,469,000	4.94%
75-Acre Restriction	2,113,743,000	6.52%
35-Acre Restriction	1,972,355,000	12.78%

Note that the base case at 15% ROI is compared against the four restriction cases also at 15% ROI. H&A originally had the base case at 10% ROI and the four restriction cases at 15% ROI to factor in perceived increased risk associated with implementation of valley fill restrictions. At the request of the steering committee and essentially on their own time H&A provided the base case at 15% ROI to keep this particular assumption constant between the alternatives.

From the H&A Phase 2 Report it appears the impact to regional coal producers is considerably less than indicated by the RTC Phase 1 work, primarily due to regional capacity at other mines to substantially make up for production lost from MTR mines in the same region.

As part of the H&A output it is evident that with or without valley fill restrictions the mining capacity of the region is in decline. Between 2001 and 2010 the annual coal production from the region, using the 15% ROI unconstrained base case, decreases by 25%. This appears to outweigh the regional percentage reductions shown above brought about by possible restrictions on valley fills.

Direct Coal Employment

Impacts of potential valley fill restrictions on direct employment for the coal industry were also provided by H&A and are summarized below:

H&A Summary Employees 2001 - 2010	Reduction in Employees		Percentage Reduction From Base Case
	Average	2001 - 2010	
Base Case - 15% ROI	16,383	4,078	0.00%
250-Acre Restriction	15,789	4,581	3.63%
150-Acre Restriction	15,778	4,735	3.69%
75-Acre Restriction	15,701	4,737	4.16%
35-Acre Restriction	15,138	5,011	7.62%

Once again it appears that the anticipated decline in coal production from this region outweighs potential impacts on employment levels as a result of possible restrictions on valley fills. In the unconstrained base case employment levels drop from 17,845 in 2001 to 13,767 in 2010, a reduction of almost 23%. The impact of reduced employment as shown above in the percentage reduction from base case will nevertheless have a negative economic impact on the region, but far less of an impact than reductions in West Virginia coal industry employment reductions experienced during the past 20 years².

² According to West Virginia Coal Association published figures, coal industry employment dropped by 73% between 1981 and 2001, while coal production increased in the same time frame by 50%.

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Mine capacity capital expenditures

Hill & Associates, Inc. also has the ability to estimate mine capacity capital expenditures associated with replacement equipment at existing operations and new equipment for new operations. This output for the EIS study region within the specified time frame is shown below:

H&A Mine Capacity CAPEX	Percentage Reduction	
	Totals Years 2002 - 2010	From Base Case
Base Case - 15% ROI	\$2,139,120,000	0.00%
250-Acre Restriction	\$1,782,090,000	16.65%
150-Acre Restriction	\$1,725,980,000	19.31%
75-Acre Restriction	\$1,920,400,000	10.22%
35-Acre Restriction	\$1,963,140,000	8.23%

In the case of mine capacity capital expenditures a comparison of percentage decrease for the base case between years 2002 and 2010 is not provided due to the inherent variability and cyclical nature of capital expenditures. However, the declining reserve base in the study region, as shown by the coal tonnage results presented previously, suggests that for the base case as treated within the framework of the H&A modeling, the level of mine capacity capital expenditures will decline accordingly. None the less, the percentage reductions from base case shown above will obviously have a negative impact on regional equipment suppliers.

Average coal price, FOB mine

Another output provided by H&A is the expected coal prices for the various options and at certain points in time. This output is summarized below:

H&A Summary Coal Price 2002 - 2010	Reduction in Coal Price		Percentage Increase From Base Case
	Average	\$/ton 2002 - 2010	
Base Case - 15% ROI	\$24.26	\$0.86	0.00%
250-Acre Restriction	\$24.75	\$1.66	1.99%
150-Acre Restriction	\$24.69	\$1.65	1.78%
75-Acre Restriction	\$25.01	\$2.39	3.09%
35-Acre Restriction	\$25.68	\$3.63	5.84%

This output of the H&A modeling also shows that within the time frame specified, and within the EIS study region, the base case price of coal declined by 3.40% before any consideration of effect from valley fill restrictions was taken into account. The percentage reductions from base case as shown above will nonetheless have a negative impact on coal producers' bottom lines.

Average wholesale price (lambda costs) of electricity

Another H&A Phase 2 output is the effect of the afore-mentioned valley fill restrictions on average wholesale price (lambda costs) of electricity generated in the study region. The range of price differentials in this case is considerably less than differences in coal tonnages and direct employment, and is summarized below for the period 2002 - 2010:

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H&A Average Wholesale Electricity Price
2002 - 2010, US dollars per KW-Hr

	Cost Increase 2002 - 2010		Percentage Increase From Base Case
	Average	US Dollars per KW-Hr	
Base Case - 15% ROI	0.02077	0.00330	0.00%
250-Acre Restriction	0.02076	0.00306	-0.06%
150-Acre Restriction	0.02074	0.00294	-0.16%
75-Acre Restriction	0.02074	0.00317	-0.14%
35-Acre Restriction	0.02199	0.00158	5.80%

As stated in the H&A Final Report, "...it is evident that the electricity prices are quite insensitive to the MTM/VF restrictions, showing differences of only 1%-2%, or 3% at the maximum." The figures presented above represent averages over the time frame considered, and are therefore considerably less than specific comparisons made at different points in time with the exception of the 35-acre case. Consistent with results obtained with coal tonnage and direct employment, the anticipated 1.15% increase in the base case from \$0.01971/KW-Hr in 2002 to \$0.02276/KW-Hr in 2010 overshadows price changes induced by potential valley fill restrictions placed on the mountaintop mining segment of the regional coal industry, with the exception being the 35-acre case.

Summary

The work conducted by RTC and H&A to date resulted in the production of final Phase 1 and Phase 2 reports. Both contractors acted under the direction and guidance of the EIS Steering Committee during the entire process, and there is no reason to question the integrity of the results obtained using the methodologies employed within the context of the EIS study region. MWCI realizes the benefit of conducting sensitivity analyses for the purposes of identifying which factors or input parameters, when changed, have the greatest impact on modeling results. Changing certain inputs, however, with no defensible logic or reasoning, becomes more of a what-if type analysis rather than a sensitivity analysis conducted from an accepted baseline. The EIS work has already spanned years, and RTC and H&A have had the benefit of input from many qualified professionals during the preparation of their Phase 1 and Phase 2 reports, respectively. Rather than replacing these years of effort with a couple of hurried months to produce a different answer, spend the time and money understanding and qualifying the results produced to date.

References

This report draws primarily upon the following sources of information:

- Effect of Various Valley Fill Restrictions on the Quantity of Coal Potentially Available for Mining, Final Report by Resource Technologies Corporation (RTC) dated 10/26/01. This is also known as the Phase 1 Report;
- Economic Impact of Mountaintop Mining and Valley Fills Environmental Impact Statement, Final Report prepared by Hill & Associates, Inc. (H&A), dated 12/12/01. This is also known as the Phase 2 Report;
- Letter memorandum from RTC to Mr. Bill Hoffman, USEPA Region 3, dated 7/14/02, defending methodologies employed by RTC during preparation of the above-mentioned RTC Final Report;
- Presentation of the RTC Final Report by OSMRE, and presentation of the H&A Final Report by H&A at a meeting convened in Charleston, West Virginia on 10/17/02; and
- Conference call between MWCI, OSMRE, H&A, and USEPA on 10/22/02.

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In addition to these sources of information used in this analysis, reference is occasionally made to previous work conducted on the topic of restrictions on Mountaintop Mining Valley Fill operations in Appalachia.



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West Virginia Department of Environmental Protection

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Cabinet Secretary

January 13, 2003

Donald S. Welsh
Administrator, Region 3
United States Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103

Via Facsimile and First Class Mail

Re: Mountaintop Mining Draft Environmental Impact Statement

Dear Mr. Welsh:

The West Virginia Division of Environmental Protection (WVDEP or State) shares many of the concerns recently expressed by reviewers for the federal agencies with regard to the December 2002 Draft Environmental Impact Statement (DEIS). Those concerns relate to readability, the presentation of legal issues, the scope (range and detail) of the alternatives and the manner in which the technical studies are characterized and presented. It is encouraging that key sections of the text are being discussed and edited this week and many of these issues may be addressed. However, please know that WVDEP has several additional concerns which have been raised on numerous occasions before the steering and executive committees and which, to date, the federal agencies have not addressed in the DEIS. The State is concerned that if these issues are not resolved the document will not be the product anticipated by the parties to the litigation or the citizens of the Appalachian coalfields.

Generally, the State is concerned that a lack of clear and consistent federal definitions and guidelines has created an uncertain regulatory climate for a state to administer the delegated Surface Mining Control and Reclamation Act (SMCRA) and/or Clean Water Act (CWA) programs. More specifically:

- 1) **Cumulative impacts:** The CWA and SMCRA (and NEPA) require regulatory agencies to address cumulative impacts of mountaintop mining and valley fills. What are the parameters the agencies should consider in evaluating such impacts? What size area is to be evaluated?
- 2) **Stream definitions:** Several federal agencies have different names and/or definitions for stream types, i.e., ephemeral, wet weather, intermittent, perennial, waters of the United States, navigable waters, etc. The various regulations which apply to coal mining operations refer to certain types of streams, yet there are no federal guidelines for stream delineation which would provide specific field tests to determine where one stream type ends and another begins. Between the different



West Virginia Department
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state and federal programs that deal with coal mining, there are over seventeen different definitions of streams/waters. How do they compare and interact in the permitting process?

- 3) **Material damage, adverse affect, adverse impact, significant impact, minimal impact, significant degradation:** The laws and regulations require the permitting agency to make findings regarding these terms. How can the oversight authorities and the COE determine if the thresholds for such terms have been exceeded? Do some of the terms have the same meaning in different programs? What parameters are used to measure impacts and what are the thresholds? Will consistent federal guidelines be developed and applied nationally?
- 4) **Contemporaneous reclamation:** Reclamation is a key component of the SMCRA program and was a critical factor in the Bragg litigation given the relationship between contemporaneous reclamation and excess spoil disposal. However, the DEIS provides no clarity or specificity regarding contemporaneous reclamation above that set forth in current state and federal law. West Virginia will continue to carry out its obligations pursuant to state law, but the issues raised in the litigation remain.
- 5) **Minimize and/or prevent degradation:** SMCRA requires an operator to "prevent" adverse impacts to the hydrologic balance and the CWA requires an operator to "mitigate" the impacts to waters of the United States. The regulatory agencies need consistency and clarity from the federal agencies that oversee compliance with SMCRA and the CWA.
- 6) **Fill minimization:** The DEIS contains no guidance for determining whether fill sizes have been minimized. As acknowledged in the DEIS, West Virginia has developed an Approximate Original Contour (AOC plus) formula in order to achieve fill optimization. However, this guidance has not been adopted but only acknowledged by the federal agencies. In order to provide consistency, federal guidance is needed.
- 7) **Monitoring requirements:** SMCRA and CWA (402, TMDL, and Antidegradation) provide for different baseline and compliance monitoring for both parameters and frequency. The requirements should be reconciled. The EIS should clarify methods which the federal agencies support as acceptable monitoring protocol. The protocol should identify the parameters to be monitored and the underlying scientific basis for the monitoring requirements.
- 8) **Mitigation:** The EIS should identify acceptable methods of mitigation, i.e., aquatic projects or monetary compensation. The EIS should also define the role of mitigation in the "avoid, minimize, restore, compensate" analysis. For example, can compensation (project or monetary) be used to reduce significant impacts to minimal impacts?

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- 9) Role of the USEFWS: The federal agencies should identify the role of the U.S. Fish and Wildlife Service in the permit review process, including the scope and timing of their involvement.
- 10) Coordinated review of permit applications: One of the critical issues in the permitting process is coordination among the state and federal agencies. The state regulatory agency, the permit applicant and the citizens who desire to participate in the permit review process need clarity on the logistics of federal participation in the review of applications for mountaintop mining/valley fill applications. The DEIS currently lacks requisite detail on this issue.

The foregoing list highlights key programmatic issues raised by the State throughout the EIS process. While the EIS should not address these matters with statements that amount to rulemaking, it would be appropriate for the document to set forth and discuss in detail the issues and the options available for resolution, including potential rule changes.

We are hopeful that the work session this week will successfully address the concerns set forth above. My staff will be participating to assist in this regard.

Sincerely,



Matthew B. Crum, Director
Division of Mining and Reclamation

MBC/ss

cc: Benjamin H. Grumbles, Deputy Assistant Administrator of Water
Environmental Protection Agency
Jeffrey D. Jarrett, Director
Office of Surface Mining
George Dunlop, Deputy Assistant Secretary
Department of the Army
Steve Williams, Director
U.S. Fish and Wildlife Service
John Cruden, Esq., Deputy Assistant Attorney General
Department of Justice
EIS Executive Committee

Pre-decisional Deliberative Process Not for Release

MOUNTAINTOP MINING/VALLEY FILL DEIS
Background Information for Communications Team
January 16, 2003

Issue: What is the current schedule for issuance of the mountaintop mining/valley fill draft Programmatic Environmental Impact Statement (DEIS)?

Background:

- Mountaintop removal coal mining is a surface mining technique practiced in the steep slope coal fields of central Appalachia that involves removing mountain ridges to expose coal seams and placing the associated mining overburden (excess spoil) in adjacent valleys. These excess spoil disposal sites are called "valley fills."
- Mountaintop mining/valley fills occur in steep terrain where there are limited disposal alternatives. Construction of valley fills results in filling headwater streams. The DEIS estimates that as many as 725 miles of headwater streams have been buried under valley fills in Appalachia. Permitting reviews conducted under the Surface Mining Control and Reclamation Act and the Clean Water Act are being implemented to provide protection for human health and the environment.
- Two lawsuits in Federal District court for Southern West Virginia, *Bragg v. Robertson* (1998) and *Kentuckians for the Commonwealth v. Rivenburgh* (2002), have highlighted certain issues related to Federal permitting of surface coal mining operations that result in valley fills. A key issue in both cases has focused on the Corps authority to issue Clean Water Act permits to discharge excess spoil into waters of the United States as "fill material." Plaintiffs in each case have alleged that the placement of excess spoil in waters is more properly regulated as "waste" under CWA Section 402 and therefore, can not be permitted. In May, 2002, EPA and the Corps issued a final rule defining the term "fill material" clarifying that excess spoil is properly regulated by the Corps under CWA Section 404 consistent with the agencies' long-standing interpretation.
- In December, 1998, as a provision of a settlement agreement in *Bragg v. Robertson*, EPA, COE, OSM, FWS, and the State of West Virginia agreed to "prepare an Environmental Impact Statement on a proposal to consider developing agency policies, guidance, and coordinated agency decisionmaking processes" to reduce the adverse environmental impacts from surface coal mining operations in Appalachia. The agencies further expressed their intent to complete the EIS "within 24 months," i.e., January, 2001.
- Since 1998, the agencies have been working together to prepare a "programmatic" EIS, a process that has included several public hearings. In August, 2002, the Secretary of Interior indicated in a statement to the press that the agencies intended to publish a draft EIS for public review and comment by February, 2003. (The agencies' schedule for meeting this commitment is attached)
- In May, 2002, the Federal District court in *KFTC v. Rivenburgh* enjoined the Corps from issuing "any further Section 404 permits within the Huntington District that have no primary purpose or

EXHIBIT 62

use but the disposal of waste, except dredged spoil disposal." As a result, the Corps has not been approving new valley fills in the coal fields of southern WV and eastern KY, except in limited circumstances where the fill is associated with a "constructive purpose," e.g., a road will be built on top of the valley fill. The Federal government has appealed this decision in the Court of Appeals for the 4th Circuit. Previously permitted mining operations are not affected by the injunction.

- The Appeals court granted the government's motion for expedited review in this case in response to the concern that ongoing mining operations discharging excess spoil under the Corps current Nationwide permit #21 would be forced to stop their operations when that national permit expires on February 11, 2003. DOJ requested that the court rule on the appeal before February 11 so that ongoing mining operations could be reauthorized under the newly issued Nationwide permit #21 in response to safety concerns and anticipated harm to mining companies and their employees associated with any disruption of ongoing operations.

Communications Issues: The following questions begin to identify the key issues that we anticipate will be raised when the DEIS is published for public review:

- The agencies committed in their 1998 settlement to complete the EIS in two years; why has the EIS taken so long to prepare? Is this DEIS fully consistent with NEPA requirements and does it fulfill the agencies' commitments under the settlement agreement to identify actions to minimize adverse environmental impacts associated with surface coal mining operations?
- In response to a 2001 FOIA request, an earlier version of the DEIS and associated technical studies were released to the public and subsequently placed on the *Charleston Gazette's* web site. The current draft is different in several important respects, including the characterization of alternative actions being considered in the DEIS. (The earlier version focused on evaluation of alternative restrictions for limiting the size of valley fills as a way to limit environmental impacts. The current version is focusing on alternative "programmatic" improvements under CWA and SMCRA to ensure more effective environmental protection. Why were these key changes made?)
- A key conclusion in the EIS is that discharges of excess spoil in waters of the U.S. associated with valley fills are properly regulated by the Corps under CWA Section 404 as "fill material." Why is the EIS making this assumption when a Federal District court found that such discharges are not fill material and enjoined the Corps Huntington District from regulating them?
- What are the key recommendations included in the DEIS designed to ensure more effective protection for human health and the environment? Will these recommendations be implemented by the agencies? What differences would implementation of those recommendations make?
- As part of the studies conducted in conjunction with the DEIS were studies to assess the economic impacts that would result from implementing actions considering limits on the size of valley fills. Information from the economic studies released under FOIA suggest that limits on the size of fills will have only minimal economic consequences on coal and electricity prices. Since smaller fills would seem to coincide with reduced environmental impacts, why is the current version of the DEIS not recommending such limits?

Pre - Decisional Document Draft Not for Release

**Mountain Top Mining and Valley Fill
Environmental Impact Statement
Timeline for Completion**

2003

- | | |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| late - January | EIS Steering Committee revisions to the interim draft EIS. |
| late January/early February | Interagency reviews of the revised draft EIS completed - document transmitted to contractor for assembly. |
| late February | Draft EIS submitted to Government Printing Office - agencies make DEIS available on internet |
| late March | <i>Federal Register</i> notice published; draft EIS available for public review and comment. 60 day comment period begins. Public meetings during the comment period are anticipated. |
| late November/early December | Final EIS released (30-day review period) |

2004

- | | |
|--------------------------|-----------------------------|
| late winter/early spring | Record of Decision released |
|--------------------------|-----------------------------|

A-104

 Cindy Tibbott
01/22/2003 09:38 AM

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cc: Dave Detamore/FWS/DOI@FWS, Diane
Bowen/ARLRS/FWS/DOI@FWS
Subject: New Petra Wood Study

Cathy Weakland and Dr. Petra Wood of the West Virginia Cooperative Research Unit (USGS - BRD), who authored some of the terrestrial wildlife studies for the EIS, have just released a study entitled "Cerulean warbler microhabitat and landscape-level habitat characteristics in southern West Virginia in relation to mountaintop mining/valley fills."

The issue of MTM/VF effects on cerulean warbler habitat is more important now than it appeared to be at the time of earlier drafts of the EIS. The Southern Environmental Law Center has petitioned the Fish and Wildlife Service to list the cerulean warbler as threatened and to designate critical habitat. The Service's 90-day finding on the petition listed mountaintop mining as one of the threats to this species, and noted that "unfortunately, the area of the country with the highest density of ceruleans is also in a coal-mining region where mountaintop removal mining is practiced."

We may want to add a sentence or two to the EIS to update the forest fragmentation discussion based on the findings of this new study. Here are some quotes from the abstract: "Territory placement on ridges was greater than expected and in bottomlands (ravines) and west-facing slopes less than expected based on availability in both intact and fragmented forest. In fragmented forest, 92% of territories occurred only in fragments with ridgetop habitat remaining. Preference for ridges suggests that MTM/VF may have a greater impact on Cerulean Warbler populations than other sources of forest fragmentation since ridges are removed in this mining process. Generally, our data indicate that Cerulean Warblers are negatively affected by mountaintop mining from loss of forested habitat, particularly ridgetops, and from degradation of remaining forests (as evidenced by lower territory density in fragmented forests and lower territory density closer to mine edges.)"

The study was a continuation of work done for the EIS in that the researchers returned to the original EIS study sites, but also added additional sites. The methods used in the new study allow a more accurate and precise estimate of bird abundance than were used in the EIS study, and facilitate evaluating the relationship between bird density and habitat and landscape variables. This study was not funded through the EIS process, but through the USGS' own "Species at Risk" program. The report has been peer-reviewed and officially approved for release by USGS.

If the Steering Committee agrees that information about these results should be mentioned in the DEIS, I could write a couple of sentences and figure out where they should be placed in the document. I have an electronic copy of the report if anyone would like to read it; however, it's a fairly large file and I don't want to overload the laptop computers of those of you in Washington.

From: <Cindy_Tibbott@fws.gov>
To: "DAVE VANDE LINDE" <dvandelinde@mail.dep.state.wv.us>
Date: Wed, Jan 22, 2003 11:20 AM
Subject: Re: New Petra Wood Study

(See attached file: Final_CERW_Rept_Jan10.pdf)

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cc:
Subject: Re: New Petra Wood Study
01/22/2003 10:12 AM

please forward me a copy

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Attachment(s):
Attachment File 1.pdf
Attachment File 2.822

EXHIBIT 63

EXHIBIT 64

**CERULEAN WARBLER (*DENDROICA CERULEA*) MICROHABITAT AND
LANDSCAPE-LEVEL HABITAT CHARACTERISTICS IN SOUTHERN WEST
VIRGINIA IN RELATION TO MOUNTAINTOP MINING/VALLEY FILLS**

Final Project Report

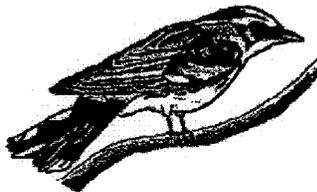
December 2002

Submitted by:

CATHY A. WEAKLAND AND PETRA BOHALL WOOD
West Virginia Cooperative Fish and Wildlife Research Unit
USGS Biological Resources Division
and West Virginia University, Division of Forestry
P.O. Box 6125, Morgantown, WV 26506

Submitted to:

USGS Biological Resources Division
Species-At-Risk Program



**CERULEAN WARBLER (*DENDROICA CERULEA*) MICROHABITAT AND LANDSCAPE-LEVEL HABITAT
CHARACTERISTICS IN SOUTHERN WEST VIRGINIA IN RELATION TO MOUNTAINTOP
MINING/VALLEY FILLS**

CATHY A. WEAKLAND AND PETRA BOHALL WOOD, West Virginia Cooperative Fish and
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ABSTRACT

The Cerulean Warbler (*Dendroica cerulea*) is a species of conservation concern in eastern North America, where declines in its population have been documented over the last several decades. Both habitat fragmentation and increased edge may negatively impact Cerulean Warbler populations. A high proportion of this species' population occurs in forested areas of southern West Virginia, where it may be threatened by loss and degradation of forested habitat from mountaintop mining/valley fills (MTMVF). We examined the impact of forest fragmentation (in particular the effects of fragment size and response to edges) on Cerulean Warbler densities from a landscape perspective using territory mapping techniques and geographic information system (GIS) technology. Specific objectives were: (1) to quantify Cerulean Warbler territory density and indices of reproductive success in forests fragmented by MTMVF mining and in relatively intact blocks of forest, (2) to quantify landscape characteristics affecting Cerulean Warbler territory density, and (3) to quantify territory-level characteristics of Cerulean Warbler habitat. The study area included portions of 4 counties in southwestern West Virginia. Territory density was determined using spot-mapping procedures, and reproductive success was estimated using the proportion of mated males as an index of reproductive performance. We quantified landscape characteristics (cover types and fragmentation metrics) from digitized aerial photographs using Arcview[®] with the Patch Analyst[®] extension and measured microhabitat characteristics on spot-mapping plots.

Territory density of Cerulean Warblers was greater in intact (4.6 terr/10 ha) than fragmented forests (0.7 terr/10 ha), although mating success of males was similar in both (60%). Habitat models that included both landscape and microhabitat variables were the best predictors of territory density. The best model indicated that territory density increased with increasing snag density, percent canopy cover >6-12m and >24m, and distance from mine edge. Models for predicting microhabitat use at the territory level were weak, indicating that microhabitat characteristics of territories were similar to habitat available on spot-mapping plots. The species did not appear to avoid internal edges such as natural canopy gaps and open or partially-open canopy roads. Territory placement on ridges was greater than expected and in bottomlands (ravines) and west-facing slopes less than expected based on availability in both intact and fragmented forest. In fragmented forest, 92% of territories occurred only in fragments with ridgetop habitat remaining. Preference for ridges suggests that MTMVF may have a greater impact on Cerulean Warbler populations than other sources of forest fragmentation since ridges are removed in this mining process. Generally, our data indicate that Cerulean Warblers are negatively affected by mountaintop mining from loss of forested habitat, particularly ridgetops, and from degradation of remaining forests (as evidenced by lower territory density in fragmented forests and lower territory density closer to mine edges).

977



Kathy Hodgkiss
01/27/2003 01:26 PM

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Subject: MTM EIS Executive Committee Call Tuesday, 1/28; 9-11am:
1-877-216-4412, 866654#

We have a lot to discuss. If possible, it might save time if each of the Execs could get together with his/her steering committee rep for a briefing on the issues before the call tomorrow. Please let me know if you have comments on the proposed agenda (see below). Many thanks to Mike Robinson for providing background info on these issues (see the attachment below). Please let me know if you have questions or need additional info. thanks, Kathy

Proposed Agenda (discussion times are approximate)

Roll call/intro (5 minutes)

Steering Committee Status Report (10 minutes)

Projected Schedule (10 minutes)

Need for Commitment of Agency Legal and Technical Support to Complete the DEIS

Issue Discussion/Resolution

Air Quality (15 minutes)

Minimal impact threshold for NWP in Alternative 2 (20 minutes)

Cumulative Impacts (20 minutes)

Executive Committee Only Session



execcommagenda1_28_03.wf

Kathy Hodgkiss, Acting Director
Environmental Services Division
U.S. EPA Region 3
215/814-3151

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MTM/VF EIS Executive Committee Agenda

Weekly Conference Call: January 28, 2002, 9 a.m.

To Connect: 877.216.4416, access code 866654#

(Page 1)

- Progress Report from Steering Committee
 - ★ Chapter II Alternatives:
 - ◆ Stream Loss, Stream Impairment, Fill Minimization, T&E Species complete
 - ◆ Assessing and Mitigating Stream Habitat and Aquatic Function near complete
 - ◆ Cumulative Impacts, Flooding, Deforestation, Definitions, Government Efficiency not complete
 - ★ Chapter I, IV, and Executive Summary not completed
 - ◆ Executive Summary redrafted but not reviewed by SC
 - ◆ Chapter IV initial comments incorporated as redline/strikeout but not reviewed
 - ★ Attorney review
 - ◆ DOI comments/edits received for completed sections
 - ◆ No EPA OGC or OFA comments received on Ch II (except for OGC minor comment on T&E)
 - ◆ OFA comments on Ch IV EJ section received
- Projected Schedule
 - ★ Chapter II
 - ◆ ~ 79 pp total. SC assigned ~43 pp, Peck assigned ~36 pp. SC completed ~29 pp with co-lead agency consensus review. Peck product must still be reviewed and agreed upon by SC
 - ◆ Best estimate is that Chapter II can be completed, with attorney feedback by 2/12
 - ★ Chapter IV
 - ◆ ~55 pp total.
 - ◆ Estimate revision by 2/21
 - ★ Chapter I and Executive Summary
 - ◆ ~23 and 7 pp, respectively
 - ◆ Estimate revision by 2/28
 - ★ Gannett Fleming, communication and release schedule
 - ◆ Provide completed chapters as finalized to communications team and GF
 - ◆ Q&As developed by 3/7
 - ◆ GF camera-ready print out to EPA by 3/7
 - ◆ DEIS to GPO by 3/11
 - ◆ Press release prepared by 3/12
 - ◆ Post on web by 3/14

EXHIBIT 65

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- ◆ Press panel 3/14
- ◆ FR published, DEIS hard copies available, comment period begins 4/18
- ◆ Comment period closes mid-July

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MTM/VF EIS Executive Committee Agenda

Weekly Conference Call: January 28, 2002, 9 a.m.

(Page 2)

◆ Issue Resolution Needed:

★ Air Quality Section

- ◆ EIS description of existing statutory and regulatory controls is inaccurate, incomplete, or unknown
 - Surface mines aren't currently considered a "major stationary source" requiring permits with preventative measures
 - Apparently no data exists that indicates whether or not surface mines produce more than 250 tons of a regulated pollutant to constitute a major source under Title V of the CAA
 - Is an enforcement approach (e.g., when an apparent violation occurs) sufficient?
 - CAA regulates fugitive dust through state air quality agency implementation plan; SMCRA fugitive dust control through state SMCRA mining agency--neither program has established defined limits for fugitive dust
 - At what point is dust a nuisance not covered by CAA or SMCRA (i.e., as opposed to a respirable health issues)?
- ◆ Action creates an unfunded mandate for states to develop BMPs without:
 - Adequate research on scope of fugitive dust problem from eastern surface coal mining
 - Any federal standards for fugitive dust limits (i.e., dust not considered respirable hazard > PM 2.5 or PM10)
 - Effective/standardized monitoring/testing technology
- ◆ Two options to proceed:
 - Option 1--Revise writeups to accurately reflect existing program controls (or lack thereof) and address WVDEP and other states' concerns with an action description stating that additional study and regulatory analysis are necessary to address this issue before BMPs could be developed. The Steering Committee is discussing the issues with EPA R3 Air Protection Division to see if this is possible.
 - Option 2--Explain that insufficient data exists for this EIS to address the issue at this time, explain issue is beyond the scope of this EIS and what the federal government plans to do to address outside of the EIS, and remove the issue from the alternatives and consequences section. The Steering Committee would need to discuss with EPA OFA how best to frame the discussion in the

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scoping section.

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MTM/VF EIS Executive Committee Agenda

Weekly Conference Call: January 28, 2002, 9 a.m.

(Page 3)

- ★ Revise alternative framework to make NWP more streamlined and make NWP/IP process more predictable
 - ◆ Propose an action establishing a minimal impact threshold for NWP in Alternative 2 (e.g., as a general matter, a 250-acre (or smaller) watershed cutoff would define when individual permits are required)
 - One suggested approach discussed by some SC members is to set the minimal impact threshold for fills in 75-acre watersheds or less. Fills in watersheds less than 250-acre watersheds, but more than 75-acre watersheds, might be eligible for NWP--if assessment protocol and mitigation determines net minimal impact can be achieved (if not, IP required). Fills in watersheds greater than 250-acre watersheds must be processed as IPs
 - Even without scientific data on the relationship of fill size to indirect impacts, it is intuitive to justify a minimal threshold based on the concept that "smaller fills are better than larger fills" with respect to direct impacts on aquatic habitat buried by fills.
 - ◆ Allow mitigation determinations for fills below the selected minimal impact threshold to be based on something other than a functional stream assessment
 - Assume all streams are "high quality" and base mitigation on an estimated Ecological Integrity Units (EIUs) multiplied by the jurisdictional stream length
 - Require mitigation, foot-per-foot of stream loss, such that offsite mitigation necessary to augment any onsite mitigation (in order to net less than minimal) would restore/enhance other in-basin streams and improve Cumulative Impact Area watershed health to some established quality level
 - ◆ Pros
 - Provides more contrast in alternatives consistent with NEPA regs
 - Provides more substantive proposals in DEIS
 - Meets public expectation that a new minimal impacts threshold would be established with this EIS. Counters possible perception by environmental stakeholders that the EIS is removing "protections" afforded by interim threshold. Possible assertion by environmental community without this change to Alternative 2 would be that the EIS is recommending "rolling back" environmental protection so that any size valley fill can be approved under NWP. This assertion could be rebuked because the EIS is not currently proposing such a position. The current EIS proposes use of COE functional stream protocol to determine which permit

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process (NWP or IP) each application must follow. This approach could result in valley fills proposed in watersheds well below 250 acres requiring the IP process.

- More predictable NWP/IP process for applicants
- Less evaluation and data collection by applicants
- Less-involved review by COE and potential reduction of FTE demands
- According to the Fill Inventory, 5471 of 6697 fills constructed were in watersheds less than 75 acres
- The DEIS fulfills the terms of the settlement agreement, meets the stated purpose in the FR notice of intent to prepare an EIS, and provides greater environmental protection and not just "looks at how permits are processed," as has been portrayed by some critics.

◆ Cons

- No documented scientific basis exists to justify this threshold. EIS technical studies could not determine if fill size mattered other than for direct stream loss impact. Other NWPs use much smaller threshold for minimal impact (e.g., 1/4 acre wetland, 200 feet of stream stabilization, etc.). Limited technical studies indicate that perennial streams exist in watersheds much less than 250 acres. There may be some legal vulnerability regarding this threshold based on the arbitrary and capricious standards.
- Plaintiffs in *Bragg* anticipated that 250-acres was an interim threshold and that the EIS would provide a more refined (i.e., smaller)
- Assuming mitigation requirements without characterizing streams might result in less rigorous avoidance and minimization alternative analysis and siting of fill locations in less desirable, higher quality streams.
- The Corps may need to revise its Regulatory Guidance Letter 02-2 or establish a regional condition for NWP 21 formalizing these 404 permit thresholds.
- A no-protocol mitigation standard needs to be developed for use in NWP-eligible permits. Experience with the stream assessment protocol may already provide a basis for selecting an appropriate EIU for mitigation purposes.
- Incorporation of this concept in the EIS will result in delays to the EIS schedule of approximately 2 weeks, including time required for interagency coordination and approvals.
- Some states already require stream bio-assessments and therefore, there would be little cost savings to the applicant. States require various types of stream characterizations for such determinations as 401 Certifications, anti-degradation, and SMCRA baseline data collections.

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9-107



Dave Densmore
01/28/2003 02:01 PM

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cc: Brent Wahlquist <BWahlQUI@OSMRE.GOV>, Charles.K.Stark@hq02.usace.army.mil, Cindy_Tibbott@fws.gov, Dave Hartos <DHARTOS@OSMRE.GOV>, dvandellnde@mail.dep.state.wv.us, Forren.John@epamail.epa.gov, Hodgkiss.Kathy@epamail.epa.gov, Hoffman.William@epamail.epa.gov, James.M.Townsend@rl02.usace.army.mil, Jeff Coker <JCOKER@OSMRE.GOV>, Kampf.Rich@epamail.epa.gov, Katherine.L.Trott@HQ02.USACE.ARMY.MIL, mamie_parker@fws.gov, mark.f.sudo@hq02.usace.army.mil, mcnum@mail.dep.state.wv.us, mrobinso@osmre.gov, Peck.Gregory@epamail.epa.gov, rhunter@mail.dep.state.wv.us, Rider.David@epamail.epa.gov, Surlano.Elshe@epamail.epa.gov
Subject: Re-proposed NWP 21 Scheme for Alternative 2

Alt:

In anticipation of our call on Thursday, we would appreciate everyone taking another look at the attached flow chart we proposed a year ago for a 75-acre minimal effects threshold for NWP 21. We have made one minor change to clarify that compensation would be determined using the protocol (in conjunction with in lieu fees or similar approach), which would also enable the Corps to make the occasional discretionary call in especially high value or unique situations before calculating that compensation need.

In addition to the "pros" identified in Mike Robinson's outline (improved contrast and substance; public and plaintiff expectation thereof; predictability; and the incentive to reduce the size of fills), we believe this approach also has the advantage that, unlike the truly arbitrary 250-acre threshold, it is based on data specifically collected for this EIS (see footnotes). Setting aside the intuitive question of smaller footprint equalling smaller direct impact, which is arguably a conclusion reached in the document, it is not clear why workload cannot also be cited as a rationale for setting such a threshold. The Corps cited this factor in setting NWP thresholds in the 2001 Draft EIS for the NWP program, and in the 2002 FR notice for reissuance of the NWPs.

We should add further that this approach makes a more substantive attempt to tackle the cumulative impact issue that we've been grappling with, and at least partially addresses the concern that smaller fills lead to more numerous fills.

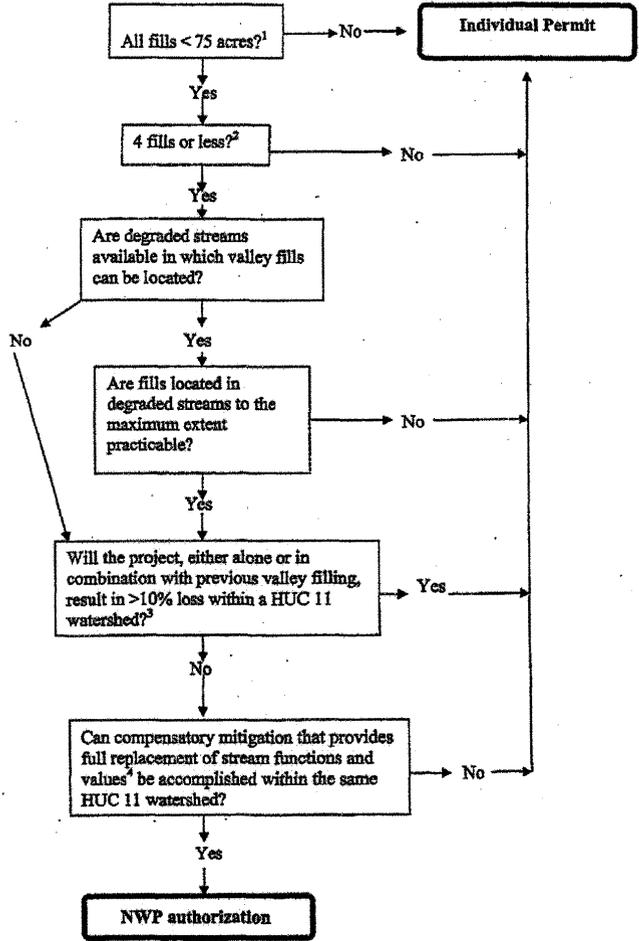


Proposal for Minimal Effects Threshold for NWP 21

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EXHIBIT 66

Proposal for Minimal Effects Threshold for NWP 21 (follows a determination that avoidance and minimization have been accomplished to the maximum extent practicable)



A-179

¹OSM's fill inventory indicates that historically, most valley fills have been < 75 acres (70% of permits in VA, 81% in KY, 59% in WV).
²OSM's fill inventory indicates that the average number of valley fills per permit has been < 4 (0.6 for TN, 3.7 for KY, 2.7 for VA, 3.2 for WV).
³Previous studies in developing areas in the mid-Atlantic have noted that impacts to stream ecosystems are identifiable when >10% of a watershed is developed.
⁴Using the Louisville stream assessment protocol.

 **Cindy Tibbott**
 02/18/03 03:17 PM

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 Subject: Edits []

Greetings Dave et al.,

Attached is a file containing some inserts for Chapters III and IV (information on the new study from Weakland and Wood on cerulean warblers), as well as some additional miscellaneous edits I'd like to offer.

In addition, I understand that there are MOUs being drafted between FWS and other federal agencies to implement the 2001 Executive Order on migratory birds. The EO directs all federal agencies to take actions to protect and conserve migratory birds. It would be an oversight if we failed to mention it in the EIS. If the team agrees that this needs to be included, I drafted a paragraph. I don't know at this point where it belongs in the EIS, and thought that those of you who have been editing would probably have a better idea.

Let me know if there are any questions....



EXHIBIT 67

Revisions to II.D.1.i, Impacts of MTM/VF on Fish Assemblages (first paragraph)

Two studies relating fish communities to potential impacts from mining and/or mining and valley filling are available for use in this EIS. The USFWS MTM Fish Assemblage Characterization Report (Stauffer and Fenner, 2002) directly addressed this issue:

Revisions to "Summary of the USFWS Stream Fish Assemblage Characterization Report" section

Summary of the USFWS Stream Fish Assemblage Characterization Report

There is little historical information regarding stream fish populations in the primary region of mountain top removal/valley fill coal mining mountaintop mining. To address this data gap, the U.S. Fish and Wildlife Service developed a program a study was designed to sample the fish communities at several pre-selected sample sites in the

Revisions to Chapter II.C.7.a.1. CWA, CWA Role in Cumulative Impact Analyses, last paragraph

Under the CWA Section 404(q) Memorandum Memoranda of Agreement between the EPA and the COE and between the Department of the Interior (DOI) and the COE (dated August 11 and December 21, 1992, respectively) EPA and and/or FWS can elevate a proposed decision by the COE to issue a CWA Section 404 permit if the proposal would impact an Aquatic Resource of National Importance (ARNI), as defined by this the MOAs. The elevation is made to higher authorities within both each agencies agency for resolution. FWS has the option of initiating this elevation procedure for adverse impacts regarding ARNIs.

Revisions to Chapter III.F.3.a (Birds), paragraph 5

Some argue that Mountaintop mining has the potential to has adverse effects on many forest songbirds, in particular neotropical migrants, through direct loss and fragmentation of mature forest habitats. Forest-interior species like the Acadian flycatcher, American redstart, hooded warbler, ovenbird, and scarlet tanager were more abundant have significantly higher populations (during at least one year of the a two-year study) in intact forests than fragmented forests (Wood and Edwards, 2001). Furthermore, cerulean warblers, Acadian flycatchers, and wood thrush are more likely to be found in a forested area as distance from the mine increases (Wood and Edwards, 2001; Weakland and Wood, 2002). These data suggest that forest-interior bird species are negatively impacted by mountaintop mining through direct loss of forest habitat and fragmentation of the terrestrial environment.

In October 2000, the Southern Environmental Law Center, on behalf of itself, 27 other organizations, and seven scientists, formally petitioned the FWS to list the cerulean warbler as a threatened species and to designate critical habitat for the species pursuant to the Endangered Species Act. The petition, currently being evaluated by FWS, cited a rangewide decline in cerulean populations of about 70 percent since 1966. As a forest-interior species, it is sensitive to forest fragmentation. In a study of cerulean warbler habitat use in the vicinity of mountaintop

mining sites in southern West Virginia, Weakland and Wood (2002) found that cerulean territory densities were lower in fragmented forests, and lower closer to mine edges, than in intact forested habitat. Mountaintop mining may have a greater negative impact on cerulean warbler populations than many other types of forest fragmentation because of this species' preference for forested ridgetops, which are removed in the mining process (Weakland and Wood, 2002). In addition, because the forested mountains of the study area contain the core breeding area for this species in North America (www.mbr-pwrc.usgs.gov/bbs/htm96/map617/ra6580.html), forest losses here may have a disproportionately greater impact on cerulean populations than forest losses in other areas.

Weakland, C. A. and P. B. Wood. *Cerulean Warbler Microhabitat and Landscape-level Habitat Characteristics in Southern West Virginia in Relation to Mountaintop Mining/valley Fills*. Final Project Report. USGS-Biological Resources Division, West Virginia Cooperative Fish and Wildlife Research Unit, Morgantown, WV. 2002.

Revisions to IV.F.2, 1st paragraph

The avian fauna of the study area is rich and contains a number of species with interior forest requirements for successful breeding. Large tracts of intact forest are rare in the eastern United States due to a number of land use change associated reasons. The cumulative impact study (USEPA, 2002) estimated (by adding past impacts, impacts from permits issued in the last 10 years, and projecting 10 years into the future) that under the no action alternative, 1,408,372 acres (2,200 square miles), or 11 percent of forest habitat in the study area would be lost due to mining. 227,198 acres (2%) of forest has been directly impacted in the study area in the last 10 years, and that an additional 227,198 acres of forest will be impacted in the next 10 years under the no action alternative. These impacts would result in fragmentation of the forests.....[continue with rest of paragraph]

Revisions to IV.F.2, 3rd paragraph

Although, the cumulative impact study suggests that ample forest will remain in the study area under future conditions of Alternatives 1, 2, and 3 to maintain relatively high PEC scores, potential adverse impacts to many forest interior bird species are likely still possible. Take for example those species with breeding ranges that are restricted to or confined mostly within the study area. The core of breeding ranges for the Louisiana waterthrush, worm-eating warbler, and cerulean warbler is within the study area. Disturbances associated with mountaintop mining could potential adversely impact each of these species' breeding ranges. Researchers have demonstrated that habitat loss does not have to be total to reduce wildlife populations; many species are "area sensitive." In other words, these species require large blocks of habitat of a certain minimum size. For example, although fragments of forest may remain after mining is complete in a previously forested area, certain area-sensitive forest birds ("forest interior" species) will be absent.

In addition to requiring large blocks of forested habitat, some species have other special habitat requirements that exacerbate the impacts of mountaintop mining on the species. The cerulean warbler, a species of concern due to population declines, may be especially affected not only because it is a forest interior species, but also because of its preference for forested ridgetops, which are removed by mountaintop mining (Weakland and Wood, 2002). The Louisiana waterthrush, a forest interior species, requires headwater streams which are eliminated by valley filling.

Paragraph reflecting Executive Order 13186 (not sure where it fits in the document)
In January 2001, the President signed Executive Order 13186 directing federal agencies to conserve migratory birds (see <http://migratorybirds.fws.gov>). The Executive Order directs each Federal agency taking actions having or likely to have a negative impact on migratory bird populations to work with the FWS to develop an agreement to conserve those birds. The protocols developed by the consultation are intended to guide future agency regulatory actions and policy decisions; renewal of permits, contracts or other agreements; and the creation of or revisions to land management plans. In addition to avoiding or minimizing impacts to migratory bird populations, agencies are expected to take reasonable steps that include restoring and enhancing habitat, preventing or abating pollution affecting birds, and incorporating migratory bird conservation into agency planning processes whenever possible. By January 2003, Federal agencies were to have developed and implemented a Memorandum of Understanding (MOU) with FWS for the conservation of migratory bird populations. As of publication of this draft EIS, MOUs with the federal EIS agencies are still in draft form. Because the Executive Order does not apply to actions delegated to states, it has limited applicability in SMCRA permitting actions in all of the study area states except Tennessee. Provisions of the Corps/FWS and EPA/FWS MOUs implementing this executive order would apply in all of the study area's states.

From: <Hodgkiss.Kathy@epamail.epa.gov>
To: <Peck.Gregory@epamail.epa.gov>, <marnie_parker@fws.gov>, <Charles.K.Stark@hq02.usace.army.mil>, <mcrum@mail.dep.state.wv.us>, Brent Wahlquist <BWAHLQUI@OSMRE.GOV>, <Kampf.Rich@epamail.epa.gov>, <mark.f.sudol@hq02.usace.army.mil>
Date: Wed, Mar 12, 2003 10:18 AM
Subject: MTM EIS Executive Committee Call Friday,3/14; 9-10am: 1-877-216-4412, 866654#

This is short notice but I hope you can be available for this call. We need to talk about how the Steering Committee proposes to factor in the decision made by the Principals on Monday (see attachment A) and what this means for the draft EIS schedule (to be determined). Please let me know if you have comments or questions. thanks, Kathy

Attachment A: (See attached file: 250threshld.pdf)

Kathy Hodgkiss, Acting Director
Environmental Services Division
U.S. EPA Region 3
215/814-3151

CC: <Cindy.Tibbott@fws.gov>, <dave_densmore@fws.gov>, <Katherine.L.Trott@HQ02.USACE.ARMY.MIL>, <James.M.Townsend@lr02.usace.army.mil>, <dandelinde@mail.dep.state.wv.us>, <rhunter@mail.dep.state.wv.us>, Dave Hartos <DHARTOS@OSMRE.GOV>, Jeff Coker <JCOKER@OSMRE.GOV>, <mrobinso@osmre.gov>, <Suriano.Elaine@epamail.epa.gov>, <Hodgkiss.Kathy@epamail.epa.gov>, <Hoffman.William@epamail.epa.gov>, <Forren.John@epamail.epa.gov>, <Rider.David@epamail.epa.gov>

Attachment(s):
Attachment File 1.pdf
Attachment File 2.322

EXHIBIT 68

Sudol, Mark F HQ02

From: Smith, Chip R Mr ASA-CW [Chip.Smith@HQDA.Army.Mil]
 Sent: Tuesday, March 11, 2003 8:53 AM
 To: Mark F Sudol; Charles K Stark; Katherine L Trott
 Subject: FW: MTM Way Ahead

Here is the result of the Principal's meeting. The Cruden (DOJ) Plan is to be followed and the EIS revised accordingly. The Regional Conditions will be launched as we intended after DOJ and Stockdale coordinate. Work on protocols and the GIS analysis of impacts should proceed as described in the EIS. The only departure is we wanted to restrict the 250 acre interim threshold to West Virginia -- the Principals decided that the entire Huntington District made more sense so we didn't have one District regulating differently in 3 States.

It is very important that Kathy get this information ASAP. Is there a way to get it to her this morning so she knows what is going on?

-----Original Message-----

From: Dunlop, George Mr ASA-CW
 Sent: Tuesday, March 11, 2003 8:13 AM
 To: Smith, Chip R Mr ASA-CW
 Cc: Stockdale, Earl H Mr OGC; Johnson, Darin E Mr OGC
 Subject: MTM Way Ahead

Chip:

After you left the meeting yesterday, the discussion lasted another 45 minutes. Here is the outcome.

1. For the EIS, adopt the Cruden plan, but provide that the interim 250 acre threshold applies to the entire Huntington District (WV, KY, OH). There will be a robust discussion of thresholds in the EIS to include the data that Ben Grumbles used, a well as reference to the way that WV has adopted the 250 acres in their procedures, and the general understanding that the thresholds are accepted by the regulated community. Further there should be discussion about the OSM perspective that there were other factors operating at the same time as thresholds and those other factors may have been the reasons that there were fewer valley fills after the thresholds were in place. OSM is very sensitive about the message that thresholds result in improved environmental quality. If that were the case, then the real message is that 200 would be better, 100, better yet and 0 fills, best of all. Instead the focus really needs to be on stream protocols and the relative quality for each stream. Thresholds may have utility once the protocols are working and it is determined that, as a practical matter, a very high percentage of permits for certain kinds of streams seem to always be X acres, so for that kind of stream, we can short-cut/streamline the process to say that the threshold for a NWP 21 would be X acres, for another kind of stream, another acreage may seem to be the norm, so that we could streamline by setting another threshold for that kind of stream. We want to communicate that we know that "one size does NOT fit all," but we want to have streamlined processes that will add to environmental protection and benefit, as well as efficiency and efficacy for the regulated community and the regulatory agencies. Further there should be reference that the Corps now has underway studies and assessments of protocols that will help guide future policy as to whether acreage thresholds are appropriate or not. There should be recognition that the EIS does not provide the science or other information to confirm the efficacy of thresholds.

2. The Corps will announce the Regional Conditions that had been held in abeyance. This needs to be further coordinated with Justice, to make sure all factors are considered and are in place before we make the

3/11/2003

announcement. John Cruden wants to have a discussion with Earl Stockdale, in particular.

3. The Corps should proceed with its investigations into protocols and other studies that would address whether or not thresholds are appropriate tools and policy. At the time that such studies are complete the Corps will proceed to formal comment and rule-making.

4. The EIS and the Regional Conditions should be announced at the same time, with a well-thought through roll-out plan designed to demonstrate that the Corps is seeking to use the best science possible to come up with the best tools to assure maximum environmental quality.

The goal should be to accomplish all this by April 4.

Please let me know if there is anything that need clarification, or if you have any further recommendations.

GEORGE

 George S. Dunlop
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3/11/2003

OASA(CW)

April 4, 2003

ADNR 30

MOUNTAINTOP SURFACE COAL MINING MASTER STRATEGY

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7. Example Notification Letters to Summit Engineering
8. 1989 Army and EPA Enforcement MOA
9. Fact Sheet Summary of 1989 Army and EPA Enforcement MOA

OASA(CW)

April 4, 2003

Mountaintop Surface Coal Mining Master Strategy Summary

KEY ELEMENTS SUMMARY

1. Notifications for New Authorizations Under Revised NWP 21
 - Held regular meetings, workshops, made presentations
 - Public Notices and Website Guidance
 - Over 100 conference calls
 - Continue to be accessible and expediting permit processing
2. Processing New Authorizations Under Revised NWP 21
 - Hayden Decision and appeal affected ability to develop guidance
 - NMA and mining company strategy was to not apply thinking issue would be resolved but legal reviews clearly demonstrated need for new authorizations
 - New NWP 21 requires Statement of Findings, NEPA (EAs), 45 day comment period, mitigation plans, which takes time but provides legal protection to all parties
 - Follow 8-Point Plan: performance bonds/letters of credit; integrate 401, 402, 404 and SMCRA reviews; Corps and States co-host permitting workshops by State; Corps Tiger Teams to speed up permit processing; interagency permit review teams for on-stop shopping; establish self-auditing program by State; use In Lieu Fee Arrangements and Mitigation Banks; and, use lessons learned for streamlining and consistency
3. MTM EIS Agency Commitments
 - Corps would implement 3 regional conditions
 - Corps would refine, calibrate, and implement stream protocols
 - 250-acre threshold for status quo part of No Action Alternative
 - Corps would conduct independent analysis using GIS database to evaluate thresholds
4. MTM EIS Threshold Plan
 - 250-acre threshold would be described as an interim measure
 - part of No Action Alternative
 - discuss potential "management utility"
 - note that benefits could have resulted from other factors
 - Corps will not supplement EIS but have independent environmental documentation for any future threshold vs. protocol analysis
5. Regional Conditions to Maintain Status Quo
 - establishes 250-acre threshold as an interim measure pending results of Corps independent analysis of thresholds vs. protocols
 - requires consideration of nature and extent of aquatic resources and assessment of potential cumulative impacts on aquatic environment

EXHIBIT 69

- requires appropriate and practicable compensatory mitigation to offset impacts to waters of the U.S., and be based on nature of the stream impacted, and direct, indirect, and cumulative losses of waters of the U.S.
6. Stream Assessment Protocols
- Corps will refine, calibrate, and implement in Appalachian Region State-by-State basis
 - Appropriate environmental documentation and Public Notices
 - Goal is for science-based protocols to replace interim non-science based 250-acre threshold
7. Enforcement (Mitigation MOA)
- January 19, 1989 Army and EPA Enforcement MOA
 - EPA is lead for "unpermitted" activities
 - Corps is lead for violations at "permitted" activities
 - Violations of both types a longstanding problem due to remoteness, lack of data, insufficient staff and resources, reluctance to shut down operations, etc.
 - Violation estimates (data evolving): Kentucky = 70; Ohio = 54; and, West Virginia = 150
 - Corps and EPA Regions 3 and 4 met March 27, 2003, along with OSM, and State staff to discuss issue and develop a plan of action, options include
 - Cease and Desist Letters which would shut down mines
 - Establish a Self-Auditing/Reporting program to achieve compliance on a voluntary basis by sending letters to mining companies with a deadline
 - Agencies will share data, records, photos, GIS, staff to refine estimates of the nature, scope, and location of violations
 - Agencies agreed to start a collaborative enforcement review
 - OSM recommends efforts concentrate on ongoing activities that never got 404 authorizations in watersheds of 50 acres or more and that were initiated after the new NWP 21 came out in March 2002
 - Best handled at the local level as opposed to DC driven

**Mountaintop Surface Coal Mining
Master Strategy Details**

1. NOTIFICATIONS FOR NEW AUTHORIZATIONS UNDER REVISED NWP 21. On May 8, 2002, the U.S. District Court for the Southern District of West Virginia ruled that the Huntington District could not permit new activities involving the placement of fill material in waters of the U.S. unless those fills have a constructive purpose. This decision caused regulatory chaos and since the matter was under appeal, it took some time for the government to determine how to proceed. The Corps issued three Public Notices informing mining companies that new authorizations would be required, and providing guidance on the new NWP 21 requirements:

- a. Louisville District has had regular meetings with mining companies since 1999; made presentations at the last 4 Mining Engineers of Kentucky Annual Meetings; held workshops; and, opened field offices to be more accessible
- b. Issuance of NWPs on February 11, 1997
- c. December 6, 2002 reminder that NWPs expired on February 11, 2002 and any further work in waters of the U.S. after February 11, 2003 would require reauthorization
- d. January 10, 2003, providing additional guidance to coal companies and consultants concerning the current NWP 21 requirements (Regulatory Guidance Letter 02-2 on Compensatory Mitigation)
- e. Public notices were also posted on the District's web page
- f. Corps Districts had conference calls with mining companies and their consultants (no logs kept, but averaged 3-4/day starting in November 2002); by December 15, 2002, Huntington District had completed 100+ phone calls to mining companies to further advise them of the need to apply for new permits
- g. Numerous meetings have occurred with some mining companies, consultants and coal associations in WV, KY and OH. The companies initiated some and the Corps initiated some

2. NEW AUTHORIZATIONS UNDER REVISED NWP 21

a. Issue: The National Mining Association is very concerned about the informational requirements for obtaining new NWP 21 authorizations for existing operations, and about the time it is taking to process PCNs. NMA also objects to the sentence "The applicant must be notified of the determination in writing before any work

in waters of the U.S. may be conducted" that has appeared in letters back to mining companies. NMA also hoped that the Corps could use information already on file to reduce requirements, but the Corps reports that the files for previously authorized projects have little or no information applicable to the new NWP 21 requirements.

b. **Background:** The current situation regarding new authorizations was, in part, affected by:

(1) The Haden decision, which prohibited the Corps from authorizing valley fills (absent a constructive purpose), and the appeal process, created an uncertain regulatory climate and prohibited the development of clear guidance for obtaining new NWP 21 authorizations until the decision was overturned in January 2003.

(2) The NMA took the position that the Corps could, under existing laws and regulations, simply grandfather or extend authorizations for ongoing mining operations, and a strategy emerged whereby mining companies did not apply for new authorizations in 2002, even though by Public Notice they had been encouraged to do so. NMA assumed that its view would prevail or that the pressure on the Corps would result in a solution other than having to obtain a new authorization. Several legal reviews (DOJ and Army) were conducted and it was affirmed each time that the Corps had no legal or regulatory basis for extending previous authorizations – new authorizations were required under the reissued NWP 21 (with new PCN and mitigation requirements).

c. **Applications:** there are approximately 98 applications "pending" in the Huntington District for Kentucky, Ohio, and West Virginia, and of those, 77 have been determined to be "incomplete applications", in some cases, very incomplete; working with incomplete applications is very inefficient.

d. **NWP 21:** The new NWP requires that the Corps prepare a Statement of Findings, do NEPA (EAs), hold 45-day comment periods, and require mitigation plans to ensure that impacts are no more than minimal. Following the process provides the best possible legal protection for both the Corps and applicants; shortcutting the process would leave mining companies vulnerable to legal challenge and could result in shutdowns.

e. **Way Forward Eight Point Plan:**

(1) For those applications that are sufficiently complete to make appropriate minimal effects determinations, the Corps intends to accept Performance Bonds and/or Letters of Credit to allow some work to proceed, under permit conditions, while mitigation plans are completed and approved. Also, temporary impacts can be conditioned separately so, for example, work could be done on "sediment ponds" while the application process is completed for permanent impacts (up to 120 days)

(2) Reinvigorate the 1998-99 interagency effort to integrate 401, 402, 404, and SMACRA permit reviews and processes to streamline decision-making and minimize informational requirements

(3) Ask States to host and run permitting workshops in each of the 3 States so that the Corps can explain the new requirements and provide guidance on how best to generate a complete permit application (Corps can be ready in 15-30 days)

(4) After the workshops, the Corps could be inundated with a slew of complete applications. HQ would work with the Districts to establish "tiger teams" to assist with the processing of NWP 21 PCNs, or accomplish other work, so that the NWP 21 PCNs can be processed as quickly as possible

(5) Establish interagency permit teams composed of regulatory and permit decision makers from Corps Tiger Teams, EPA, FWS, State DNR's and OSM, to review PCNs concurrently and work together to resolve issues in a "one-stop shopping" streamlined process to reduce the application backlog

(6) Continue to pursue a plan to establish a self-auditing program for each State to assist mining companies with efforts to come into compliance

(7) Explore options for developing and using In-Lieu-Fee Arrangements and Mitigation Banks for stream impacts

(8) Use the lessons learned to establish a prospective streamlined process to facilitate consistency of approach by all agencies so that information developed to satisfy requirements of one agency would be presented in a format that could be used by other agencies for their respective requirements

3. MTM EIS AGENCY COMMITMENTS

The Federal and/or state agencies cooperatively would:

- develop a joint application form as part of the MOA and FOP.
- develop guidance, policies, or institute rule making for consistent definitions of stream characteristics as well as field methods for delineating those characteristics.
- continue to assess aquatic ecosystem restoration and mitigation methods for mined lands and promote demonstration sites.
- work with interested stakeholders to develop a "best management practices" (BMPs) manual for restoration/replacement of aquatic resources.
- evaluate and coordinate current programs for controlling fugitive dust and blasting fumes from mountaintop MTM/VF operations, and develop BMPs and/or additional regulatory controls to minimize adverse effects, as appropriate.

- develop guidelines for calculating peak discharges for design precipitation events and evaluating flooding risk. In addition, the guidelines would recommend engineering techniques useful in minimizing the risk of flooding.
- based on the outcome of ongoing informal consultation, identify and implement program changes, as necessary and appropriate, to ensure that future mining is carried out in full compliance with the Endangered Species Act.

The COE would:

- continue to implement the 3 regional conditions in WV and KY as described in the MTM EIS No Action Alternative
- through a coordinated interagency process, make case-by-case determinations of the applicability of NWP 21 to MTM/VF projects.
- refine and calibrate the stream assessment protocol for each COE District where MTM/VF operations are conducted to assess stream conditions and to determine mitigation requirements as part of the permitting process.
- compile data collected through application of the assessment protocol along with PHC, CHIA, anti-degradation, NPDES, TMDLs, mitigation projects, and other information into a GIS database
- use these data to evaluate whether programmatic "bright-line" thresholds, rather than case-by-case minimal individual and cumulative impact determinations, are feasible for CWA Section 404 MTM/VF permits.

OSM, in conjunction with the SMCRA agencies would:

- consider rulemaking to replace the stream buffer zone rule with requirements for alternatives analysis and environmental impact analysis similar to the requirements of CWA Section 404.
- incorporate mitigation/compensation monitoring plans into SMCRA/NPDES permit inspection schedules and coordinate SMCRA and CWA requirements to establish financial liability (e.g., bonding sureties) to ensure that reclamation and compensatory mitigation projects are completed successfully.
- develop guidelines identifying state-of-the-science, best management practices (BMPs) for selecting appropriate growth media, reclamation techniques, revegetation species, and success measurement techniques for accomplishing post-mining land uses involving trees.
- if legislative authority is established by Congress or the states, require reclamation with trees as the post mining land use.

EPA would:

- as appropriate, develop and propose criteria for additional chemicals or other parameters (e.g., biological indicators) that would support a modification of existing state water quality standards.

consider, along with the COE, designating areas generally unsuitable for fill disposal, referred to as Advanced Identification of Disposal Sites (ADID).

4. MTM EIS THRESHOLD PLAN

a. 250 acre threshold would be described in the EIS as an interim (status quo) measure in WV, and KY, because in the opinion of some it seems to have "a certain utility" for environmental protection, pending the results of a separate science-based analysis of thresholds to be undertaken by the Army.

b. The EIS discussion will note that WV finds "a management utility" in the 250 acre threshold, and will also note that other events, such as WV changing its mining regulations, may account for all or part of the perceived "utility" of the threshold.

c. The 250 acre threshold discussion will be included in the No Action Alternative because it maintains the status quo on an interim basis and because the EIS does not contain the science and data required to establish this or any threshold.

d. Army will NOT supplement the MTM EIS to disclose the results of its independent analysis of thresholds because the MTM EIS does not contain the information necessary to inform a decision on the appropriateness of thresholds, or what alternative thresholds should be considered.

5. REGIONAL CONDITIONS TO MAINTAIN STATUS QUO. Districts in the Appalachian region will implement the 3 Regional Conditions (or some minor variation) immediately through the Public Notice process and complete any necessary environmental documentation. [except perhaps KY because protocols have been in use for a period of time]

a. Discharges of fill material authorized under NWP 21 comprising a valley fill or a coal waste ("slurry") impoundment may not, as a general matter, occur below the point on a stream (as measured from the toe of the fill or slurry embankment) that drains a watershed of 250 acres or more. In specific circumstances, however, the Corps may determine, after a project-specific evaluation, that valley fills or slurry impoundments larger than 250 acres may be authorized under NWP 21 where impacts would be no more than minimal. This threshold is being established as an interim measure to ensure impacts are minimal and shall be reevaluated after completion of the stream assessment protocols currently under development by the Corps and based on consideration of information gathered for use in the interagency environmental impact statement on mountaintop removal coal mining.

b. In determining whether an activity may be authorized under NWP 21, the nature and extent of aquatic resources affected by the activity will be evaluated as part of the assessment of potential cumulative impacts on the aquatic environment.

c. Each NWP 21 authorization for valley fills or slurry impoundments will include appropriate and practicable mitigation to offset impacts to waters of the U.S. The appropriate mitigation will be based on consideration of the nature of the stream impacted, and direct, indirect and cumulative loss of waters of the U.S.

6. **STREAM ASSESSMENT PROTOCOLS.** The Corps will continue work to develop and implement stream assessment protocols in the Appalachian Region, and before making them permanent, on a State-by-State basis, will do appropriate environmental documentation (separate from MTM EIS) and use the Public Notice process [except for Kentucky where protocols were implemented in 2002]. Additionally, the Corps will undertake an independent analysis of the utility of thresholds using site-specific verification data, and using a GIS-based evaluation process, evaluate whether the interim 250-acre threshold should be made permanent, lowered, increased or eliminated. While the Corps currently believes that the Stream Assessment Protocols are the superior regulatory tool, this independent analysis will verify this assumption and if it proves false, make new recommendations regarding thresholds. Any regulatory changes would be accomplished by notice and comment rulemaking, as appropriate.

7. **ENFORCEMENT.** Enforcement is handled in accordance with a Memorandum of Understanding executed January 19, 1989. Paragraph "D." states that the Corps will be the lead enforcement agency for all violations of Corps-issued permits, while the EPA will be the lead enforcement agency for all unpermitted discharge violations. It is common knowledge that there are violations occurring in the mining industry. Sites are often remote, and neither agency has the staff and resources to look for violations, however, if credible information is provided, the agencies should, and usually do, an investigation in accordance with the MOA. The Corps advises that some mining companies have figured out that it is significantly cheaper to pay administrative penalties for violations than it is to request a new authorization and have to fund compensatory mitigation requirements. Also, it is not meaningful to simply compare lists of mining operations with SMCRA permits to lists of mining operations that have 404 permits. Some operations do not require 404 permits, or they have completed their work in waters of the U.S. and have let their authorizations expire. If the Administration wants to address this issue more aggressively, they need to develop a consistent policy and begin issuing *Cease and Desist Letters*, which will shut down operations until compliance is achieved (if it can be).

The Data

Ohio: approximately 108 mine sites with no 404 permit; assuming 50% (conservative) require a 404 permit, the Corps expects 54 potential enforcement cases

Kentucky: Data collected from March 18, 2002, to April 3, 2003, indicates that the Kentucky DSMRE has issued 87 mining permits. The Corps has authorized 6 and 10 are pending (18% of the State's issued permits). Of the 87, 54 are actively mining without 404 permits (which may or may not be needed). The Corps also reports 28 pending 404 applications that are not reflected in the above data since the SMCRA

authorization was before March 2002. A conservative estimate would be 70 potential enforcement cases considering SMCRA permits issued prior to March 2002.

West Virginia: Based upon phone contact on April 3, 2003, the West Virginia Department of Environmental Protection appears to be reluctant to divulge their data, but based upon one seasoned employee's best professional judgment, there are 150 potential enforcement cases

The Way Forward

a. Interagency meeting held on 27 March 2003 in Lexington, KY. Participants included Office of Surface Mining, USEPA representatives from HQ and Regions 3, 4 and 5, USFWS (Frankfort, KY office), KY Division of Water, KY Division of Surface Mining Reclamation & Enforcement (KDSMRE), and the Army Corps of Engineers from the division as well as Huntington, Louisville, Nashville & Pittsburgh districts.

b. Meeting requested by USEPA Region 4 (USEPA-R4) to discuss their desire to initiate a *self-reporting/self-audit* with the coal industry in KY to bring violations into compliance with the Clean Water Act.

c. For regional consistency, the Corps is also reviewing this issue in Ohio, Tennessee, Virginia and West Virginia and will coordinate with USEPA Regions 3 and 5.

d. Discussed timeframe to begin initiative, what resources each agency had to offer (GIS, databases, aerial photographs, manpower etc), and details on how to determine the category (perennial, intermittent or ephemeral), extent and quality of waters that had been impacted.

e. The potential number of violations was discussed but the Corps and State stressed that further investigation was needed to gain an accurate understanding of the extent of violations.

f. USEPA-R4 advocated sending out a letter to coal companies with a deadline to self-report unauthorized activities. USEPA-HQ advocated meeting and working w/ the National Mining Association (NMA) to get active mines into compliance.

g. All participants agreed that a date needed to be agreed upon to start the enforcement review and written documentation should be prepared supporting this decision. Dates suggested: March 10, 2000 – the date of KDSMRE Reclamation Advisory Memorandum #133 regarding the need for Section 404 permits for fills in waters of the U.S.; October 2001 – the date of a Corps memorandum to the field requiring compensatory mitigation on NWP 21; March 2002 – the effective date of the new NWP's.

h. OSM recommended that the enforcement effort concentrate on those ongoing activities that never got Corps authorization (higher priority than those activities working under expired Nationwide permits), in watersheds of 50 acres or more in size, that were initiated after the effective date of the new NWP 21 (18 March 2002).

i. **Outcome of Meeting:** The Corps division and districts committed to reviewing/comparing Corps and State lists of permitted coal mining activities, within the next 30 days, to determine extent of enforcement issue. A Corps intra-agency conference call would follow to discuss the issue.

j. **Future Actions:** Joint EPA/Corps memo that explains why a particular date was selected for the enforcement initiative, Corps/USEPA conference call or meeting re: enforcement issue in KY (and other states as necessary); Possible regional MOU/MOA with USEPA-R4 (and other regions as appropriate) that further defines specific agency roles and responsibilities in this initiative (beyond 1989 Enforcement MOA). Also need to involve the Department of Justice in this initiative.

Attachments

December 6, 2002 Public Notice Expiration of NWP 21 Authorizations
January 10, 2003 Public Notice PCN Requirements
January 10, 2003 Public Notice Regulatory Guidance Letter (mitigation)
Example Notification Letters to Summit Engineering
1989 Army and EPA Enforcement MOA
Fact Sheet Summary of 1989 Army and EPA Enforcement MOA

J:\shared\smith,chip\Mountaintop Mining\MTM Master Strategy

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Date: Thu, Apr 17, 2003 7:57 AM
Subject: Revised Info on New PCNs and Enforcement

See attached. Based on our pre-meeting the other day I added into our 8-point plan (which is now a 9-point plan) language on the Corps and EPA immediately sending out some sort of information letter or notice that is neutral, encouraging mining companies to contact us if they have questions about compliance requirements. I also added in language about later on, once we get better data, sending targeted letters to operations we have reason to believe may not be in compliance. Those letters would precede the workshops we hope to hold to help mining companies understand requirements and complete their applications. Finally, in the enforcement section I added a clearer statement about us sending out Cease and Desist orders at some point (yet to be determined) but not until after the workshops and self-auditing parts of the plan have had a reasonable period to work. Although DOJ's view of all of this is not known, EPA (Peck) and Army (myself and Sudol) seemed to be in general agreement on this strategy when we met the other day.

I understand that there will be a meeting today at EPA at 9:30 to discuss the attached agenda.

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Attachment(s):
Attachment File 1.htm
Attachment File 2.doc
Attachment File 3.doc
Attachment File 4.822

**Mountaintop Surface Coal Mining
Status and Way Forward**

Authorizations -- Existing and New Projects

Issue: The National Mining Association remains concerned about the informational requirements for obtaining new NWP 21 authorizations for existing operations, and about the time it is taking to process PCNs. NMA also hoped that the Corps could use information already on file from previous authorizations to reduce requirements, but the Corps reports that the files for previously authorized projects have little or no information applicable to the new NWP 21 requirements regarding stream impact assessments and compensatory mitigation. Obtaining new authorizations for existing operations is akin to applying for an authorization for a new project. The reason for this is that there are new requirements for obtaining an authorization under the revised NWP 21. If the Corps were to decide that all projects previously authorized under the old NWP 21 could be processed without the new NWP requirements, the Corps would be violating its own regulations and both the Corps and mining companies would be vulnerable to lawsuits.

Applications: there are approximately 90 incomplete applications "pending" in the Huntington District for Kentucky, Ohio, and West Virginia.

Way Forward:

- (1) Immediately send out a neutral information letter or notice explaining the need for obtaining new authorizations under certain circumstances, and encouraging mining companies to contact the Corps or EPA for information and advice.
- (2) For those applications that are sufficiently complete to make appropriate minimal effects determinations, the Corps intends to accept Performance Bonds and/or Letters of Credit to allow some work to proceed, under permit conditions, while mitigation plans are completed and approved. Also, temporary impacts can be conditioned separately so, for example, work could be done on "sediment ponds" while the application process is completed for permanent impacts (up to 120 days)
- (3) Reinvigorate the 1998-99 interagency effort to integrate 401, 402, 404, and SMACRA permit reviews and processes to streamline decision-making and minimize informational requirements
- (4) Ask States to host and run permitting workshops in each of the 3 States so that the Corps can explain the new requirements and provide guidance on how best to generate a complete permit application (Corps can be ready in 15-30 days). Before the workshops, send out letters to mining operations that the agencies believe have the highest potential for requiring authorization to come into compliance.

(5) After the workshops, the Corps could be inundated with a slew of complete applications. HQ would work with the Districts to establish "tiger teams" to assist with the processing of NWP 21 PCNs, or accomplish other work, so that the NWP 21 PCNs can be processed as quickly as possible

(6) Establish interagency permit teams composed of regulatory and permit decision makers from Corps Tiger Teams, EPA, FWS, State DNR's and OSM, to review PCNs concurrently and work together to resolve issues in a "one-stop shopping" streamlined process to reduce the application backlog

(7) Continue to pursue a plan to establish a self-auditing program for each State to assist mining companies with efforts to come into compliance

(8) Explore options for developing and using In-Lieu-Fee Arrangements and Mitigation Banks for stream impacts

(9) Use the lessons learned to establish a prospective streamlined process to facilitate consistency of approach by all agencies so that information developed to satisfy requirements of one agency would be presented in a format that could be used by other agencies for their respective requirements

Enforcement

Background

- ξ January 19, 1989 Army and EPA Enforcement MOA
- ξ EPA is lead for "unpermitted" activities (4 categories)
- ξ Corps is lead for violations at "permitted" activities
- ξ Violations of both types a longstanding problem due to remoteness, lack of data, insufficient staff and resources, reluctance to shut down operations, etc.
- ξ Violation estimates (data evolving): Kentucky = 70; Ohio = 54; and, West Virginia = 150

Way Forward

- ξ Corps and EPA Regions 3 and 4 met March 27, 2003, along with OSM, and State staff to discuss issue and develop a plan of action, options include
 - o Agencies will share data, records, photos, GIS, staff to refine estimates of the nature, scope, and location of violations
 - o Agencies agreed to start a collaborative enforcement review
 - o OSM recommends efforts concentrate on ongoing activities that never got 404 authorizations in watersheds of 50 acres or more and that were initiated after the new NWP 21 came out in March 2002
 - o Best handled at the local level as opposed to DC driven
 - o First, establish a Self-Auditing/Reporting program to achieve compliance on a voluntary basis by sending letters to mining companies with a deadline

- o After an agreed upon time for self-auditing, Cease and Desist Letters would be sent to those mining operations that simply refuse to come into compliance

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**Mountaintop Surface Coal Mining
April 17, 2003 Principal's Meeting
Agenda (4-11-03 draft)**

- ξ Purpose of the Meeting (Leary)
 - o Regional Conditions (250 Acre Threshold/Stream Protocols)
 - o Conclusion of the EIS
 - o Compliance Initiatives
 - o Enforcement Initiatives
 - o CEQ Questions about dealing with permit application backlogs, impacts on mining companies unable to comply, plan for identifying operators still requiring authorization, enforcement options and timelines
- ξ Principals' Perspectives (all)
- ξ Proposed Compliance Eight Point Plan (Dunlop) and Discussion
- ξ Consideration of Enforcement Initiatives (all)
- ξ Regional Conditions (Dunlop) and Discussion
- ξ Summary of Stream Protocols (Sudol)
- ξ Conclusion of the EIS
- ξ Summary of decisions and due outs (Leary)

Participants (may bring staff)

Council on Environmental Quality - Bill Leary
Corps of Engineers - Mark Sudol
Department of Justice - John Cruden
Department of Army - George Dunlop
Environmental Protection Agency - Ben Grumbles
Fish and Wildlife Service - Steve Williams
Office of Surface Mining - Jeff Jarrett
West Virginia - Matt Crumm

IV. Environmental Consequences

Action 25 specifies that, based on the outcome of the informal consultation with FWS, EPA, COE, OSM, and their state counterparts will identify and implement program changes, as necessary and appropriate, to ensure that future mining is carried out in full compliance with the ESA. This action would apply to any of the alternatives selected.

In reviewing the field-level coordination, consultation, and reporting procedures carried out by SMCRAs and CWA regulatory authorities in authorizing mountaintop mining activities in Appalachia, the agencies have identified a number of the procedures specified in SMCRAs regulations and the 1996 programmatic biological opinion that have not been followed. Of particular concern is the inconsistent interpretation of the requirements of the biological opinion by State regulatory agencies and some OSM offices. For example, in many cases these State agencies have not provided sufficient site-specific information to enable timely FWS review of project proposals, and they are often unwilling to incorporate FWS recommendations for the protection of listed and proposed species, particularly when those recommendations pertain to indirect or cumulative effects. In many instances, explanations and concurrence procedures have also not occurred. Consequently, the level of protection for listed and proposed species envisioned in the programmatic biological opinion, or that would have been obtained through project-by-project section 7 consultations with the federal regulatory authority, does not appear to have been achieved.

Under the No Action Alternative and Alternatives 1, 2, or 3 (Action 2), the Corps would be responsible for consulting with FWS to meet the requirements of the ESA. Alternatives 2 and 3 emphasize coordination between the SMCRAs agency and FWS prior to the final Corps/FWS consultation step.

Action 25 in Alternatives 1, 2, and 3 call for the federal agencies to consult with FWS on program changes on MTM/VF activities, and the development of coordination procedures to ensure that mining projects are carried out in compliance with the ESA. The same requirement would apply under the No Action Alternative.

There are no significant differences among the No Action Alternative and Alternatives 1, 2, and 3 in terms of their ability to protect endangered and threatened species.

IV.A.2. Irreversible and Irretrievable Commitment of Resources, 3rd paragraph, third sentence, "Consequently, the effects of MTM/VF on aquatic resources are irreversible for a buried stream segment, but may not be significant to the hydrologic regime within the larger watershed." Considering that the accuracy of this statement depends on one's definition of "hydrologic regime," it should be deleted. (For example, my definition of hydrologic regime includes natural thermal and flow periodicity and good water quality.)

Same paragraph, later: "Reclamation techniques exist to equal or exceed natural forest regeneration and productivity. In the cases where these techniques are applied, the loss of resource may be no less reversible than timbering; and in some cases productivity gains surpassing forestation on native soils." I am not aware of attempts by Burger or anyone else to develop a natural forest - i.e., one with a diversity of commercial and non-commercial species and understory species, as opposed to commercially harvestable stands on a small scale. Most biologists would probably argue that the loss of the natural forest IS probably irreversible, as the unique combination of flowing streams, species diversity, organic matter, etc. has been lost. At the very least, it is FAR LESS REVERSIBLE than timbering, which at least leaves seed sources and native soils in place. These sentences should be removed.

Next paragraph, first sentence: "While loss of individuals of certain species within the mined areas may be irreversible, individuals of other species may be mobile enough to relocate to adjacent interior forest tracts." Although the claim that wildlife just moves somewhere else when development happens is a claim that is made frequently by developers, it is contrary to accepted biological principles. Displaced wildlife will move into adjacent habitats and likely find that they are already occupied by more fortunate members of their species, and competition for food and nesting locations will simply mean that the displaced ones die or fail to reproduce, etc. This is a myth that we don't want to help perpetuate by including it in the EIS.

Section IV.B.1.a Direct Stream loss from MTM/VF, 1st paragraph after Table IVB-1, first sentence: In an effort to condense things, some important language was omitted from the earlier version of this sentence. Suggested rewrite (additions in bold): "Studies show that while invertebrates and microbiota in headwater streams are only a minute fraction of living plant and animal biomass, they play a critical role in providing organic matter to downstream reaches by converting leaf litter to finer particles that are more easily used as a food supply for downstream aquatic life."

Same section, fifth paragraph after Table IVB-1 (paragraph begins with "Similar effects to headwater..."), 2nd & 3rd sentences: "As discussed by Yuill in the post-mining land use report, suitable developable land is in short supply in some parts of the West Virginia study area. Consequently, creation of flat land suited for roads and development often places fill material in streams." This will probably be seen as a thinly-veiled attempt to downplay the impacts of MTM, especially since we are not aware of large numbers of road and development projects in the study area of WV that have or propose to place fill in streams. Furthermore, Yuill's study more or less says that MTM has created plenty of developable land in the study area, contrary to these statements.

(936)

Section IVB1b Indirect stream impacts, 6th paragraph, last sentence: "No findings were made that the impacts downstream of MTM/VF constitute significant degradation of the watershed." If impaired aquatic life, and selenium above state water quality standards, resulting in streams being placed on the 303(d) list don't constitute "significant degradation," what would?

Section IV.B.1.e. Mitigation, 2nd paragraph. The last sentence reads as if the COE and SMCRA agencies are the ones responsible for doing the mitigation.

IV.C. Soils & Vegetation; Direct Impacts, 3rd paragraph. The summary of the terrestrial impacts data from the Landscape Scale Cumulative Impacts study leaves out the data on disturbed land that existed prior to 1992 (Baseline condition). Because this impacts on the total loss of forest in the area (it's part of the true cumulative impact), it should be included. Suggested language: "The cumulative impact study (USEPA, 2002) estimated (by adding past impacts, impacts from permits issued in the last 10 years, and projecting 10 years into the future) that under the no action alternative, 1,408,372 acres (2,200 square miles), or 11 percent of forest habitat in the study area would be lost due to mining."

Section IV.C1, 5th paragraph: "However, regardless of the tree species, the reduction in the time required to re-establish a forest community equal or better than that which existed on the disturbed areas prior to mining will also provide other environmental benefits...". For the reasons stated in our comments above, few biologists would agree that a "forest community equal or better than that which existed" will develop on these sites, even in hundreds of years. Burger's "better than that which existed" concept for reforestation refers only to the ability to quickly produce marketable timber, not a diverse terrestrial ecosystem.

Section IV.D2, Wildlife Populations, 7th paragraph: "There will also likely be an increase in game species such as whitetail deer and turkey due to an increase in grasslands and the diversification of habitats." This hasn't been studied. Whitetail deer and turkey need forests and are present in unmined forests. The perception that they "increase" with surface mining likely has as much to do with increased visibility (you can see a long way on these mines without all those dam trees in the way) as it has to do with any population response. The sentence should be deleted.

Section IV.I1b, Data collection & analysis, 3rd line: "...demonstrations that avoidance and minimization also include adequate mitigation...". Avoidance and minimization come first, followed by mitigation for unavoidable impacts. Suggested re-write: "...demonstrations that impacts to waters of the United States have been avoided and minimized to the maximum extent practicable, and that compensatory mitigation is offered to offset unavoidable aquatic impacts...."



John Forren
05/21/2003 03:27 PM

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Subject: Briefing Outline



MTMBriefOutline.wpd

As promised on the conference call today....

EXHIBIT 72

BRIEFING
Mountaintop Mining/Valley Fills (MTM/VF)
Draft Programmatic Environmental Impact Statement

I. Context: Brief History of MTM/VF Issue

- Pre-1998 Federal Programs
- 1998 *Bragg* Lawsuit against WV SMCRA Program and Corps
- Settlement Agreement (Federal Claims only)
 - EIS
 - 250-acre limit on use of NWP 21 and Cumulative Impact Consideration
 - Interagency MOA

II. Development of EIS

- Initial direction - focus on limiting size of valley fills
- Preliminary version of DEIS: FOIA
- Change of Direction - focus on programmatic improvements
- Cost and Time/Delay Issues

III. Key Substantive Conclusions/Directions in the DEIS

- Three Action Alternatives - Focus on "programmatic" improvements
- Technical Studies includes as Appendices - Key Findings
- Economic Analyses

IV. Schedule

- Release of the DEIS and Comment Period
- Anticipated Release of the Final EIS
- Agencies with Records of Decision
- Implementation and Follow up

V. Anticipating Issues

- Process v. Environmental Protection
 - Where's the meat? What is being proposed that will improve environmental protection? What proposals will place limits on MTM/VF?
- NWP21/thresholds/cumulative impacts
- Limits under SMCRA - Buffer Zone Rule
- Economic Analyses - Does Data Support More Limits on MTM/VF?
- Technical Studies - Do Studies Show Significant Adverse Environmental Impacts?

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Date: Mon, Jun 2, 2003 10:25 AM
Subject: Hostile Q&A draft

Here's the "hostile" Q&A draft as last edited by Greg Peck. Some are not suited for web posting, but were developed in anticipation if they were asked on the teleconference with media on 5/29.

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Attachment(s):
Attachment File 1.doc
Attachment File 2.822

EXHIBIT 73

>>> Michael Gaudin 05/27/03 12:16PM >>>

Here are some hostile questions we can expect in some form or another. At the moment I have given any thought to how one might respond to them, but I'll think on it.

Q. An earlier version of this EIS, made public at the end of the Clinton Administration, included limits on the size of valley fills. The Bush Administration, however, has removed those limits and made other changes aimed at watering down the environmental restrictions on mountaintop mining. Given the devastating environmental impacts of mountaintop mining, which have been documented time and time again, how can you justify these changes?

While this EIS does not recommend restrictions on valley fills, the Bush Administration tightened requirements on valley fills with the 2001 reauthorization of a CWA Section 404 General Permit, Nationwide 21. This permit requires that, if avoidance is not possible, stream impacts be minimized and aquatic functions be replaced or restored through mitigation. These requirements also apply to any mining proposal processed as a CWA Section 404 Individual Permit. Each fill proposal is evaluated on a case-by-case basis to catalogue the aquatic impacts and set mitigation.

As the data from studies were compiled and the statutory requirements reviewed, the agencies saw no legal or technical basis upon which to base a fill restriction at this time. Site-specific conditions dictate how big fills can be without degrading downstream watersheds. Some streams are already degraded and larger fills may be appropriate. Other streams are high quality and no fills or smaller fills may be more suited to those situations. In some cases one or two larger fills are preferable to many small fills relative to overall watershed health. One size restriction does not fit all circumstances. The agencies will continue studying whether general restrictions may be appropriate in the future.

Q. Earlier this year the Bush Administration created a team here in Washington which spent about three months re-writing this EIS. Why was it necessary to bring them to Washington? If it's true that they were only editing the document and not completely re-writing it, why did it take 14 weeks? What political appointees participated in or influenced that team and what specific changes did political appointees incorporate into this EIS? What coal industry representatives participated in the writing or editing of this EIS?

The EIS encompasses nearly 4,000 pages, over 30 technical studies, and programmatic review of Federal CWA, SMCRA, ESA, CAA, and counterpart state requirements. Any EIS undergoes agency headquarters review by policy staff and attorneys. Meeting in Washington was the best way for four Federal agencies and OSM to consolidate comments, circulate new drafts, and finalize the document. No political appointees or coal industry representatives participated.

Q. This EIS seems more than anything else to be a document aimed at encouraging more coal production at the expense of the environment. To what extent was this EIS influenced by the President's Energy Policy?

The EIS principally evaluates environmental, economic, and social impacts as prescribed by NEPA. The alternatives in the EIS are framed in the context of CWA, SMCRA, ESA, and CAA. While the expansive coordination proposed by the EIS may clarify requirements for the regulated community, application of the combined and complimentary technical expertise of the agencies on coal mining proposals will improve project design and lessen environmental impacts. None of the aforementioned acts preclude coal mining. In fact, one of the main tenets of SMCRA is that coal mining can be conducted in an environmentally sound manner to meet the Nation's energy needs.

Q. What involvement did Steve Griles, Deputy Secretary of the Interior, have in the development of this EIS?

Mr. Griles was briefed early in 2001 on the status of the EIS by OSM career staff prior to confirmation of current OSM Director Jeff Jarrett. Other than receiving routine briefing papers prepared by OSM for the Department, Mr. Griles has not been involved in finalizing the document.

Q. Does the Fish and Wildlife Service endorse all the recommendations of this EIS?

The Fish and Wildlife Service is a co-lead and signatory of this draft EIS. They have fully participated in the preparation of this EIS from its inception.

Q. Was the release of this EIS delayed by disagreements between the Corps of Engineers and EPA? If so, what was the nature of the argument and how has it been resolved?

EPA and the COE are discussing use of the terms of the Bragg settlement agreement (i.e., the 260-acre watershed threshold for NWP 21 permits) as a COE Regional Condition applicable beyond West Virginia and following the final EIS. This discussion has not significantly delayed finalization of the EIS.

U.S. Army Corps of Engineers
Mountain Top Mining / Valley Fills (MTM / VF) Briefing Brochure
May-June 2003

Surface Coal Mining--- The way forward



photo credit: Kennedy DSM&E

The Corps of Engineers, EPA and other federal and state agencies are undertaking vigorous coordinated efforts to help bring mountain-top mining operations into full compliance with improved Clean Water Act regulations. Our goal is to implement a science- and watershed-based regulatory regime that is successful in providing the regulated community with the most practical regulatory tools to assure Americans the continued sustainable use of America's coal resources.

*ORSA OLD INTERNAL WORKING PAPERS
NOT SUBJECT TO FOIA*

EXHIBIT 74

SECTION I: OVERVIEW OF SURFACE COAL MINING

Coal is important to Americans. America cannot meet its energy needs or advance its energy independence without coal. The U. S. relies on coal to maintain its economic strength and will continue to do so for the foreseeable future. Appalachia produces about 40% of the nation's coal (431.2 million tons) annually. 50% of the electricity generated in the United States comes from coal-fired power plants, and clean-burning Appalachian coal can greatly contribute to America's Clear Skies initiatives. Coal mining provides Appalachia with 53,000 jobs and approximately \$1.5 billion in direct annual tax revenues to local, state, and federal governments. However, at the time, most if not all coal mining operations in Appalachia are economically stressed to the point of insolvency.

< http://www.energy.gov/HQ/Press/releases01/maypr/energy_policy.htm >
< http://fossil.energy.gov/coal/power/sect/sect_top/sect_top00.stm >

Surface mining is generally the most economical form of coal mining. Of the estimated 55.3 billion tons of recoverable coal reserves that remain in the Appalachian region (over 100 years supply at the current rate of recovery), about one third can be surface mined. The term "mountaintop mining and valley fills" (MTM / VF) describes a type of surface mining that is relatively common in Appalachia. In MTM / VF mining, the overburden of rock and dirt that is removed from near-surface coal seams at the top of steep Appalachian mountains and ridges is deposited in the adjacent ravines and valleys. The fill areas are referred to as "valley fills".



photo credit: Virginia DMM&E

The U. S. Army Corps of Engineers issues permits for valley fills. Valleys often include waters and watersheds that are part of headwater ecosystems. When waters are impacted, valley fills become subject to Section 404 of the Clean Water Act (CWA) that regulates fill material placed into "waters of the United States". The Army Corps of Engineers is the primary federal authority responsible for issuing Section 404 permits. This is accomplished either by a Section 404 individual permit (IP), or through the use of the Section 404 general permit (GP) known as Nationwide Permit 21 (NWP 21). The Section 404 program is just one of several State and Federal permitting programs applicable to surface coal mining.

Litigation against surface mining has often focused on the permitting process, significantly Kentuckians for the Commonwealth, Inc. v. Rivenburgh. <<http://www.osmre.gov/mtindex.htm>> An unprecedented interagency effort is currently studying the permitting of surface mining and, as a result, steps have already been taken to improve those processes. These recent actions are summarized in Section II.

There are many operations that require, but do not yet have, an NWP 21 authorization. Due to the effects of litigation, recent actions to restructure the permitting program, and other factors within the mining industry, the Corps currently faces a backlog of permit requests to be processed. For example, only twenty-five Nationwide Permit 21 (NWP 21) permits have been issued in the Corps' Huntington District since January 29, 2003. At present the Corps' NWP 21 backlog consists of approximately:

- > 90 submissions received but determined to be incomplete
- > 8 complete submissions advanced to Pre-construction Notification (PCN)
- > 15 submissions in post-PCN evaluation
- > 6 submissions evaluated and ready to issue
- > 4 non-compliant operations under enforcement
- > Potentially 200 ongoing operations that have not yet submitted applications for permits

Actions are being taken to address the need for permits and to improve the NWP 21 authorization process.

Insights gained during the interagency programmatic review and other initiatives have yielded a greater understanding of how mining operations relate to the various regulatory programs. Future actions will provide important environmental protections and enable mining activities to continue within an efficient and effective regulatory structure. These actions will focus on:

- > Identifying and stopping un-permitted mining operations,
- > identifying bottlenecks and streamlining the regulatory process for operations that require permits under multiple programs (Clean Water Act section 402 and section 404 programs; the Surface Mining Conservation and Reclamation Act program; etc.), and
- > utilizing scientific assessment tools to determine the degree to which a water body's ecological functions would be unavoidably impacted, and how those unavoidable impacts might be sufficiently mitigated.

Upcoming actions planned by the Corps and other agencies to address this problem are summarized in Section III.

The "way forward" reflects the Corps' intent to:

- > ensure that NWP 21 will continue to be available to accomplish sustainable use of coal resources;
- > communicate our policies with clarity to the regulated community, and ensure that those policies are practicable, predictable, and consistent.
- > assist the regulated community to comply with the new permitting requirements, particularly the new requirements of the commonly utilized Nationwide Permit 21 (NWP 21);
- > apply state-of-the-art technology and science to advance environmental stewardship;
- > implement a strengthened, more thorough permitting process to help permittees, the permitting agencies, and the courts avoid costly litigation; and
- > focus the agencies' enforcement resources on uncooperative operators by directing the most stringent enforcement options toward them and reserving lesser levels of enforcement for cooperative mining operators.

SECTION II: RECENT ACTIONS

Summary

Federal agencies, State, and local governments, in voluntary partnerships with stakeholders and in response to litigation, have in recent months undertaken an unprecedented collaborative effort to:

- > Consider the problems associated with assessing the cumulative effects of multiple fills within a watershed. Although the effect of a single fill in a valley that contains only an ephemeral stream may be "insignificant", the overall effect of many such fills may not be.
- > Require appropriate and practicable mitigation in all cases where waterbodies are impacted, even where the impact is considered to be minimal
- > Conduct a programmatic review of all permitting procedures and policies related to surface mining to assure greatest efficiency and efficacy.

Examples

• Forty-four Nationwide Permits were reissued.

On January 16, 2002, the Corps reissued its forty-four Nationwide Permits. Nationwide Permits are general permits designed to provide streamlined authorizations for those projects that have no more than minimal environmental impacts. Eleven NWPs (including NWP 21 for Surface Coal Mining) and seven General Conditions were actually modified. Due to the modifications, in order to continue work in waters of the United States, those mining operations with previous authorizations under NWP 21 are required to be reauthorized and to comply with new requirements for providing appropriate and practicable compensatory mitigation to replace aquatic functions lost as valley streams are filled with mining overburden (valley fills).

< <http://www.usace.army.mil/inet/functions/cw/cecw/reeg/2002nwos.pdf> >
< [http://www.lrh.usace.army.mil/or/permits/Public Notices/02-248-21-1.pdf](http://www.lrh.usace.army.mil/or/permits/Public%20Notices/02-248-21-1.pdf) >

• EPA's definition of "fill material" was adopted by the Corps.

On May 8, 2002, the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency published in the Federal Register a final rule to harmonize differences between existing EPA and Army Corps of Engineers regulations by adopting EPA's effects-based approach to the definition of the term "fill material." The Corps' longstanding "primary purpose" test has been replaced with an effects based test – that is, fill material is that material placed in waters of the U.S. which has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water. Examples of fill material include rock, sand, soil, clay, plastics, construction debris, wood chips, and overburden from mining or other excavation activities, including coal slurry.

• Regulatory Guidance Letter 02-2 and the National Wetlands Mitigation Action Plan
On December 24, 2002, the Bush Administration affirmed its commitment to the goal of no net loss of our Nation's aquatic resources by undertaking a series of actions to improve the ecological performance of compensatory mitigation under the Clean Water Act and related programs. Implementation of the 16 action items contained in the National Wetlands Mitigation Action Plan will help ensure effective restoration and protection of the functions of our Nation's wetlands. The specific action items focus on achieving ecologically sustainable

mitigation informed by science, improved accountability and performance monitoring, and on providing information and options to those who need to mitigate for losses of aquatic functions, including mountain top coal mining operations.

< http://www.lrl.usace.army.mil/orf/Mitigation/RGL_02-2.pdf >

< <http://www.lrl.usace.army.mil/orf/Mitigation/Mit.Action.Plan.24Dec02.pdf> >

• The draft MTM / VF Programmatic Environmental Impact Statement was released.

On May 29, 2003, the second draft of this extensive, interagency study was released. This document provides a roadmap for agencies to collaboratively improve the permit application and review procedures. It also identifies the data needed to support quality decision-making, where that data is available, and where it is lacking in the current process. The final version of the PEIS will be completed before the end of 2003, after an opportunity for further public review and comment.

< <http://www.epa.gov/region3/mntop/index.htm> >

• Three new Regional Conditions to NWP 21 were established.

In June, 2003, the Corps promulgated three new "regional conditions" to NWP 21 as an interim measure. The Corps is committed to using science-based bio-assessment tools to fully and accurately determine environmental impacts and to better determine mitigation requirements. Where such tools are not already available to be used, the Corps has placed three new conditions on the use of NWP 21 that:

- 1) establish a "250-acre watershed" threshold above which individual permits, rather than the NWP 21 general permit, are required
- 2) require bio-assessments to aid in avoiding and minimizing aquatic impacts wherever practicable, and assessing cumulative impacts on the aquatic environment, and
- 3) require appropriate and practicable compensatory mitigation to offset unavoidable impacts to waters, and require that mitigation actions are based on the biotic and hydrologic functions of the aquatic resources impacted.

< <http://www.usace.army.mil/inet/functions/cw/cecwo/reg/2002nwps.pdf> >



SECTION III: UPCOMING ACTIONS

• Enforcement against non-complying mining operations

Recent EIS related data collection has given state and federal authorities "reason to believe" that there are numerous non-permitted mining operations taking place throughout Appalachia. Identifying the operators who deliberately disregard regulatory requirements has therefore become a high priority. The EPA has statutory responsibility for enforcement action against un-permitted operations. Similarly, identifying operators who are exceeding their permitted authority or who are not meeting their permit requirements is a high priority that is the responsibility of the Corps of Engineers.

< [http://www.lrl.usace.army.mil/orf/CWA Section 404 Permit Program.pdf](http://www.lrl.usace.army.mil/orf/CWA%20Section%20404%20Permit%20Program.pdf) >

• Assistance to keep cooperating mines working (9-Point Plan)

There is a "backlog" of mining operations that are now technically un-permitted because their permits have expired and their submissions for new permits have not been fully processed. Many of these operations only recently submitted their renewal applications, due in part to the general confusion that has existed in the past year about permitting requirements. Most applications that have been received are not complete by the new standards.

Litigation in the U.S. District Court that covers West Virginia and Kentucky caused many operators to believe that they would have to cease operations at some existing projects, and that new authorizations could not be provided. Also, due to court order, the Corps' Huntington District could issue no new permits for surface coal mining operations unless fills had constructive purposes from May 8, 2002, to January 29, 2003. Consequently, the regulatory environment was fraught with uncertainty, making it difficult for the Federal government to issue clear guidance for new authorizations. Yet all old NWP 21 authorizations expired in February 2003, and could not be extended or grandfathered.



photo credit Kentucky DSMRE



United States Department of the Interior

OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT

Appalachian Regional Coordinating Center
Three Parkway Center
Pittsburgh, Pennsylvania 15220

DEC 22 2003

To deal fairly with cooperating operators who find themselves in this situation, the Corps and its partners are pursuing a NINE POINT education and voluntary compliance strategy, but reserve the right to use enforcement tools for willful, flagrant, or repeat violators at any time.

The nine elements of this action plan include:

- 1) distribute an informational notice explaining the need for obtaining new authorizations under certain circumstances, and encouraging mining companies to contact the Corps or EPA for information and advice (May 20, 2003)
- 2) collaborate with States to hold permitting workshops to explain the new NWP requirements and provide guidance on how best to generate a complete permit application (June-July 2003)
- 3) establish Corps "Tiger Teams, using personnel from other districts to augment staff in districts where needed, to expedite processing of NWP 21 Pre-Construction Notices (June 2003)
- 4) establish interagency teams to simultaneously, rather than sequentially, process permit applications (June 2003)
- 5) implement a "self-audit" program to assist mining companies with efforts to come into compliance (May 2003)
- 6) use Performance Bonds and/or Letters of Credit to allow some work to proceed under permit conditions, while mitigation plans are completed and approved
- 7) When appropriate, develop and use In-Lieu-Fee Arrangements and Mitigation Banks to facilitate mitigation activities¹
- 8) continue interagency efforts to (a) integrate the processing of 401, 402, 404, and SMCRA permits to the greatest extent possible, and (b) ensure that the information required in permit applications is limited to that information actually necessary and useful to the agencies' decision-making process
- 9) develop standard presentation formats for use by operations that require permits from more than one agency, so that applicants can submit commonly required data in a fashion that meets the needs of all agencies rather than each agency requiring its own distinct presentation format.

• Development and adoption of Stream Assessment Protocols

The Corps, in partnership with other Federal and State agencies, is developing innovative stream assessment protocols that can be applied to specific types of streams and specific hydro-geologic areas. The protocols will focus on the identification and measurement of biotic and abiotic characteristics of stream environments as indicators of stream health and function. Once coordinated with the States and public, these new standards can replace the non-science-based, one-size-fits-all standards that have proven inadequate for assessing the quality and functional value of streams and mitigation projects. Stream Assessment Protocols are an excellent example of a staff level initiative on the part of Corps and state environmental regulators to develop better, science-based regulatory tools for greater efficiency and efficacy.

- < <http://www.usace.army.mil/inet/functions/cw/csw/reg/vol2-01.pdf> >
- < <http://155.80.93.250/or/info/EKYStreamAssess/eastkstreamassessment.htm> >

¹ See Federal Register Notice, November 7, 2000, Federal Guidance on Use of In-Lieu Fee Arrangements for Compensatory Mitigation Under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act ("In-Lieu Fee Guidance") < <http://www.usace.army.mil/or/mitigation/infedreg.pdf> >; Federal Register Notice, November 28, 1995, Federal Guidance on the Establishment, Use and Operation of Mitigation Banks ("Banking Guidance"); and also < <http://www.epa.gov/cwaw/sect/ndts/facts/fact16.html> >

Mr. Jim Hecker
Trial Lawyers for Public Justice
1717 Massachusetts Avenue, N.W. #800
Washington, D.C. 20036

Re: OSM-2003-00042/OS-2003-00727/FWS-2003-00771

Dear Mr. Hecker:

This is in response to your Freedom of Information Act (FOIA) request related to the preparation of the Environmental Impact Statement (EIS) on mountaintop mining and valley fills in the Appalachian coalfields (64 Fed. Reg. 5800, Feb. 5, 1999). This request is limited to information received, sent, or originated since April 15, 2002. Specifically, you requested:

1. Written and electronic documents that are part of the administrative record for this EIS;
2. Letters, memos, e-mails, telefaxes or other records of communications between employees or agents of your agency and anyone outside the executive branch of the United States related to the EIS;
3. Letters, memos, e-mails, telefaxes or other records of communications sent by or among members of the agencies of the EIS Steering Committee related to the EIS.

This is the Department of the Interior's (DOI) final response to your request and supplements our responses to you dated July 29, August 8, and October 30, 2003. Enclosure A lists the remaining documents we are releasing in response to your request. Enclosure B lists the documents, and portions thereof, we are withholding for the reasons cited.

EXHIBIT 75

Enclosure B
MTM/VF EIS FOIA
Requester: J. Hecker



TRIAL LAWYERS FOR PUBLIC JUSTICE, P.C.

January 21, 2004

Via Email (forren.john@epa.gov)

Mr. John Forren
 U.S. Environmental Protection Agency
 Region III (3EA30)
 1650 Arch Street
 Philadelphia, PA 19103

Re: Supplemental Comments on Draft Programmatic Environmental Impact Statement (DEIS) on Mountaintop Removal Mining/Valley Fill Activities in Appalachia, announced at 68 Fed. Reg. 32487 (May 30, 2003).

Dear Mr. Forren:

The West Virginia Highlands Conservancy and the Ohio Valley Environmental Coalition submit the following supplemental comments on the Draft Environmental Impact Statement (DEIS) for mountaintop removal mining and valley fills in Appalachia. These comments supplement prior comments submitted on January 5, 2004.

We demonstrated in our initial comments that mountaintop removal mining and valley fills (MTM/VF) are associated with violations of the stream water quality criteria for total selenium in West Virginia. We criticized the DEIS for falsely claiming that "the EIS studies did not conclude that impacts documented below MTM/VF operations cause or contribute to significant degradation of waters of the U.S." DEIS, p. I.LD-9. We also criticized the DEIS for failing to propose any remedies for those selenium violations.

A new study released by the U.S. Fish and Wildlife Service (FWS) confirms the seriousness of the selenium problem. During the spring and summer of 2003, FWS conducted a survey of selenium in fish, water, and sediments in streams in southern West Virginia. In a January 16, 2004 letter to the West Virginia Department of Environmental Protection (attached), the Supervisor of FWS' Pennsylvania Field Office, David Densmore, concludes that:

- Selenium was present in all fish samples.
- Selenium concentrations in fish in three watersheds exceeded the toxic effect threshold level for whole fish.
- Selenium is bioavailable in West Virginia streams, and violations of the EPA selenium water quality criterion may result in selenium concentrations in fish that could adversely affect fish reproduction.

The following documents, or portions thereof, are being withheld for the reasons cited:

Exemption 5 U.S.C. 552(b)(4): "Trade Secrets, commercial or financial information obtained from a personal and privileged or confidential"

Exemption 5 U.S.C. 552(b)(5): "Inter-agency or intra-agency memoranda or letters which would not be available by law to a party other than an agency in litigation with the agency"

Exemption 5 U.S.C. 552(b)(6): "Personal Information affecting an individual's privacy"

Item No.	Date	Subject
B-1.	April 15, 2002	Fax from Cathleen Short, FWS, to Benjamin Tuggle, Sam Hamilton, Mamie Parker, David Densmore of FWS; Subject: Mountaintop Mining Draft EIS-Preferred Alternative. Entire document withheld (5 pages) under Exemption (b)(5) as deliberative process privileged.
B-2.	April 15, 2002	E-mail from Cathleen Short, FWS, to Sherry Morgan and other FWS recipients, Subject: Steve Griles' meeting on April 29 on mountaintop mining EIS (includes an additional April 15 e-mail from Sherry Morgan to same recipients on same subject). Entire document withheld (1 page) under Exemption (b)(5) as deliberative process privileged.
B-3.	April 15, 2002	E-mail from Cathleen Short, FWS, to Mamie Parker and other FWS recipients, Subject: Steve Griles' meeting on April 29 on mountaintop mining EIS. Entire document withheld (1 page) under Exemption (b)(5) as deliberative process privileged.
B-4.	April 15, 2002	E-mail from Robin NimsElliott, FWS, to Diane Bowen, FWS, regarding Steve Griles' meeting on April 29 on mountaintop mining EIS; transmits other e-mails on same subject from Cathleen Short and Sherry Morgan, FWS, with copies to multiple FWS recipients. Entire document withheld (2 pages) under Exemption (b)(5) as deliberative process privileged.
B-5.	April 16, 2002	E-mail from Mamie Parker, FWS, to Sherry Morgan, Dave Densmore, Sam Hamilton, Cynthia Dohner, FWS; Subject: Mountaintop Mining Conference call mining (includes two additional FWS e-mails, same subject). Entire document withheld (3 pages) under Exemption (b)(5) as deliberative process privileged.
B-6.	April 16, 2002	Mountaintop Mining EIS Alternative B. Entire document withheld (1 page) under Exemption (b)(5) as deliberative process privileged.
B-7.	April 22, 2002	E-mail from Sherry Morgan, FWS, to Dave Densmore, Jeff Underwood, and Sue Essig, FWS; Subject: Steve Griles' meeting on mountaintop mining (includes two additional FWS e-mails, same subject). Entire document withheld (1 page) under Exemption (b)(5) as deliberative process privileged.
B-8.	April 23, 2002	E-mail from Nancy Broderick, OSM-HQ, to Mike Robinson, OSM-ARCC, forwarding example documents. Entire document withheld (11 pages) under Exemption (b)(5) as deliberative process privileged.
B-9.	April 24, 2002	E-mail from Sherry Morgan, FWS, to Dave Densmore, Benjamin Tuggle, Sue Essig, and Jeff Underwood, FWS, regarding MTM conference call on Friday. Entire document (1 page) under Exemption (b)(5) as deliberative process privileged.

5-5-2

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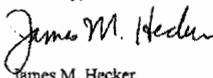


Mr. John Forren
January 21, 2004
Page 2

In some cases, fish tissue concentrations were near levels believed to pose a risk to fish-eating birds.

In light of this study, the DEIS has no scientific basis for claiming that MTM/VF operations do not cause or contribute to significant degradation of waters of the U.S. The FWS study demonstrates that significant degradation is already occurring. EPA's 404(b)(1) Guidelines prohibit activities that cause significant degradation of aquatic ecosystems. 40 C.F.R. § 230.10(c). Therefore, the DEIS must address this issue and propose remedies to eliminate all existing and potential stream degradation due to selenium contamination from MTM/VF activities.

Sincerely,



James M. Hecker

Counsel for the West Virginia Highlands
Conservancy and the Ohio Valley
Environmental Coalition

5-5-1

01/21/2004 10:19
01-19-2004 12:33PM FROM-MOUNTAIN ST JUSTICE

304-344-9149 7-388 P.002/006 F-327



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pennsylvania Field Office
Suite 322
315 South Allen Street
State College, Pennsylvania 16801

January 16, 2004

Alynn Turner
Director, Division of Water and Waste Management
West Virginia Department of Environmental Protection
414 Summers Street
Charleston, WV 25301

Dear Ms. Turner:

During the spring and summer of 2003, we conducted a survey of selenium in fish, water, and sediments in various waterbodies in southern West Virginia. Because U.S. Environmental Protection Agency studies for the draft Environmental Impact Statement on Mountain Top Mining/Valley Fills found high selenium concentrations in waters downstream of valley fills, and selenium is highly bioaccumulative and toxic to fish and wildlife, we were interested in determining whether the waterborne selenium downstream of valley fills is accumulating in fish tissues to ecologically relevant levels. In addition, because mercury is associated with coal and also bioaccumulates, we initially included mercury in our chemical analysis.

We conducted our sampling May 28-30, and August 19-21, 2003. Most of the streams we sampled were previously sampled for selenium in water by EPA or WVDEP. As a cost-saving measure, we did not collect water samples in those locations; however, we did collect a sediment sample at each location. When sampling stream fish, we targeted primarily creek chubs and blacknose dace. These species are efficient bioaccumulators of selenium (bioaccumulation factors of 4,545 and 4,590, respectively, Mason *et al.* 2000), and would be expected to serve as a food source for birds such as the belted kingfisher and great blue heron. Selenium in fish consumed by these birds could be transferred to offspring in bird eggs, resulting in embryo mortality or deformity (Lemly 2002).

We also sampled East Lynn and Beech Fork Lakes in Wayne County, and one stream in each of their watersheds (Trough Fork and Miller's Fork, respectively). The East Lynn watershed is heavily mined, while the Beech Fork watershed is relatively undisturbed by mining. For the lakes, we targeted bluegill, largemouth bass, gizzard shad, and white crappie. Samples included whole fish, fillet (left side, skin on, scaled), and eggs.

Table 1 provides results for streams in the Little Coal/Coal River, Big Coal River, and Mud River watersheds, and one sedimentation pond downstream of a valley fill at the head of Trace

Braach. Table 2 provides results for East Lynn and Beech Fork Lakes, and Trough and Miller's Forks.

Mercury analysis was conducted only on samples collected in May. Mercury was found in only one stream fish sample (creek chubs from Stanley Fork), but was present in many of the lake fish samples. Mercury was not found in any of our sediment samples, or in any of four water samples. Because of the low incidence of detections in the stream samples, we did not submit the August stream samples for mercury analysis.

Selenium was present in all fish samples. As a guideline for evaluating the ecological significance of the selenium concentrations, we used Lemly (2002). Based on a synthesis and interpretation of scientific literature, Lemly has established "toxic effect thresholds for selenium in aquatic ecosystems," which he describes as "levels at which toxic effects begin to occur in sensitive species of fish and aquatic birds. They are not levels that signify the point at which all species die from selenium poisoning" (p. 31). Lemly's values and associated biological effects in fish are 8 ppm (dw) for filets¹ (reproductive failure); 10 ppm for eggs (reproductive failure); and 4 ppm for whole fish (mortality of juveniles and reproductive failure). For reproductive failure in birds, Lemly cites 7 ppm in food chain organisms.

Creek chubs and blacknose dace collected from Trace Branch, Sugartraw Branch, and Stanley Fork (where BPA or WVDEP had previously identified selenium water concentrations above the EPA chronic water quality criterion of 5 µg/l) contained selenium at concentrations above Lemly's 4 ppm toxic effect threshold level for whole fish. Our water sample from a valley fill sedimentation pond at the head of Trace Branch hollow contained 6.44 µg/l selenium, and bluegill captured in the pond contained 6.89 ppm selenium. Selenium levels in fish samples from the Trace Branch pond and Sugartraw Branch were just below the 7 ppm threshold value for reproductive failure in birds.

Fish from several streams where other agencies had documented stream selenium concentrations greater than the BPA criterion did not exceed the Lemly threshold values. Among many possible explanations for this is evidence that other water quality parameters, especially sulfates, can interfere with selenium uptake (Great Lakes Environmental Center 2002). In studies related to the EIS for mountaintop mining, EPA identified high sulfate concentrations at many sampling locations.

No fish or fish eggs collected from Beech Fork Lake or East Lynn Lake contained selenium at concentrations above Lemly's thresholds. However, tissue selenium concentrations were generally higher in the East Lynn samples, and long-term monitoring of this situation is advisable. Selenium concentrations in creek chub samples from both Trough Fork and Miller's Fork were low relative to other streams in our survey.

Our results show that selenium present in surface waters in southern West Virginia is bioavailable, and that violations of the EPA selenium water quality criterion may result in

¹Note that Lemly's filet values are for skinless filets, and our samples were skin-on.

selenium concentrations in fish that could adversely affect fish reproduction. In some cases, fish tissue concentrations were near levels believed to pose a risk to fish-eating birds. It is likely that benthic invertebrates in some of these streams would be similarly contaminated, thereby posing a risk to birds that depend upon aquatic insects as a food supply (e.g., Louisiana waterthrush). Accordingly, we believe that the potential for release of selenium during and after mining should be assessed to ensure that future permits are not issued where there is a likelihood that selenium water quality standards will be violated. We are aware that the West Virginia Geological Survey has analyzed the selenium content of coal in various locations (www.wvgs.wvnet.edu/www/dataset/te/Maps/Semapmax.gif). If those results can be correlated to the selenium water and fish data, it may be possible to develop coal and/or overburden analysis requirements for permit applicants that would characterize the degree of selenium risk associated with a given application.

If you have any questions regarding this information, please contact Cindy Tibbott of my staff at 814-234-4090, ext. 226.

Sincerely,



David Demore
Supervisor

Literature Cited

Great Lakes Environmental Center. 2002. Draft aquatic life water quality criteria for selenium. Traverse City, MI.

Lemly, A.D. 2002. Selenium assessment in aquatic ecosystems: A guide for hazard evaluation and water quality criteria. New York: Springer-Verlag New York, Inc. 162 pp.

Mason, R. P., J.-M. Laporte, and S. Andres. 2000. Factors controlling the bioaccumulation of mercury, arsenic, selenium, and cadmium by freshwater invertebrates and fish. Arch. Environ. Contam. Toxicol. 38:283-297 (as cited in Great Lakes Environmental Center 2002).

Location, collection date, tailing	Sediment ¹ Se (ppm dw)	Water Se and Hg (µg/l)	Fish species & tissue	Mean fish size (mm)	Tissue Se (ppm, dw)	Tissue Hg ² (ppm, dw)
Deech Rock Lake June 3, 2003 38.3131, 48.16219	ND (<0.238)	ND (Hg <0.100 Se <2.36)	Bluegill - 5 whole fish Bluegill - 3 gravid females Largemouth bass - 3 whole fish White crappie - 5 fish Largemouth bass - fillets from 1 gravid female Largemouth bass - fillets from 1 gravid female and 1 male Bluegill - eggs from 3 fish Largemouth bass - eggs from 1 fish (tissue fish went for fillet, above) Largemouth bass - eggs from 1 fish	160 149 328 125 455 408 (f) 370 (m) 153 455 496	0.600 0.635 0.871 0.600 1.76 dw, 0.422 ww 1.26 dw, 0.490 ww 1.08 2.06 2.48	ND ND 0.613 0.360 2.16 dw, 0.517 ww 0.368 dw, 0.143 ww ND ND ND
Trough Fork June 4, 2003 30.04661, 40.13049	ND (<0.248)		Creek chub	7.5-10 (5 fish)	0.564	ND
Bithers Fork June 4, 2003 31.04661, 40.13049	ND (<0.245)		Creek chub	7.5-8.5 (5 fish)	0.713	ND

¹ Mercury was not detected in sediments. The detection limits ranged from 0.917 to 0.0990 ppm.

² Mercury detection limits for tissue samples ranged from 0.145 to 0.280 ppm.

Table 1. Results of sediment, water, and fish tissue analyses for selenium and mercury in samples collected from various watersheds in southern West Virginia.

Location, collection date, tailing	Other agency station code	Other agency Se water (µgms, µg/l)	Sediment Se (ppm)	Water Se and Hg (µg/l)	Fish species (Whole fish)	Mean fish size (mm)	Fish Se (ppm, dw)	Fish Hg ² (ppm, dw)
Little Coal/Cool River Watersheds								
Sauce/White Oak Branch	EPA MT 39	ND (<2.85)	ND (<0.225)		Creek chub Creek chub Creek chub	101 146 72	1.86 1.43 3.19	ND ND ND
37.85269, 81.803831								
Coal/Trace Branch Pond								
29-May-03								
27.87764, 81.84137								
Coal/Let Fork Branch	EPA MT 34B	22.7	0.486		Bluegill	152	6.89	ND
28-May-03								
37.805423, 81.846021								
Coal/Trace Branch	WVDEP							
19-May-03								
37.87055, 81.83786	WVKG-10-T-19	6.4	ND (<0.240)		Creek chub Creek chub	158 100	5.3 8.04	ND ND
Big Coal River Watershed								
Edging Fork	EPA MT 69	ND (<2.89)	0.221		Blacknose dace	77	2.9	
20-Aug-03								
37.31687, 81.32789								
Clear Fork/Sycamore Creek	EPA MT 81	ND (<2.89)	0.113		Blacknose dace Creek chub	71 109	2.45 0.845	
20-Aug-03								
37.97782, 81.42259								
Clear Fork/Rockhouse Creek	WVDEP							
19-Aug-03								
37.87352, 81.29026	WVKG-47A	<5	0.485		Blacknose dace Creek chub	77 82	1.89 1.33	
White Oak/Let Fork	WVDEP							
19-Aug-03								
38.03.07.81.31.41	WVKG-35E	7	1.49		Creek chub	98	1.73	
Seng Creek	WVDEP							
20-Aug-03								
37.69381, 81.29.274	WVKG-42	16	0.479		Blacknose dace Creek chub	84 135	2.75 2.05	
Bullfinch Fork	EPA MT 64	13	0.387		Blacknose dace	72	0.81	
20-Aug-03								
37.889, 81.351								

Table 2. Results of sediment, water, and fish tissue analyses for selenium and mercury in samples collected from East Lynn and North Fork Lakes, and Trough and Miller's Forks, Wayne County.

Location, collection date, reference	Sediment ¹ Se (ppm, dw)	Water Se and Hg (ug/l)	Fish species & tissue	Mean fish size (mm)	Tissue Se (ppm, dw)	Tissue Hg (ppm, dw)
East Lynn Lake June 2, 2003 30.04561, -81.25049	ND	ND	Bloogill - 5 white fish	89 - 113	1.66	ND
	<0.238	<0.0095 Hg <1.5 Se	Golden shad - 5 whole fish	89 - 100	3.29	ND
			Largemouth bass - 1 whole fish (Densate, eggs removed)	260	1.72	0.340
			Largemouth bass - 2 whole fish	272	3.66	0.370
			White crappie - 2 whole fish	201	0.863	0.175
			Largemouth bass - fillets from 3 fish	337	3.25 dw, 0.772 ww	1.00 dw, 0.238 ww
			Golden shad - eggs from 1 fish	285	3.54	ND
			Largemouth bass - eggs from 1 fish (remainder analyzed whole - see above)	240	3.17	ND
			Largemouth bass - eggs from 3 fish	343	4.73	ND

Location, collection date, reference	Other agency Se (ppm, dw)	Sediment Se (ppm, dw)	Water Se (ug/l)	Fish species	Mean fish size (mm)	Fish Se (ppm, dw)	Fish Hg (ppm, dw)	
Mud River Watershed Mud/Rushpach Branch 21-Aug-03 30.04568, -81.03302 Rudolphs Ferry Fork 30-Aug-03 30.04566, -81.05601 Mud River 21-Aug-03 30.04561, -81.07046 Mud/Rushpach Branch 30-May-03 30.04564, -81.05282	EPA MT 02	ND (<0.0278)	Hg 0.952 Se ND (<2.5)	Blacknose shiner Creek chub	50 109	0.907 <0.401		
	EPA MT 15	ND (<0.245)		Creek chub Creek chub	185 84	4.19 5.11	0.28 ND	
	EPA MT 23	12.9	0.134		Creek chub	108	1.4	
	EPA MT 16	36.3	0.182		Blacknose Shiner Creek chub	75 104	6.52 6.85	ND ND

¹ Mercury detection limits for fish tissue samples ranged from 0.148 to 0.203 ppm. August 2003 fish samples were not submitted for mercury analysis.

**Recommendations for Pre-Mine Assessment of Selenium Hazards
Associated With Coal Mining in West Virginia**

prepared by
A. Dennis Lemly, Ph.D.
Senior Scientist in Aquatic Toxicology

January 5, 2004

Background on Selenium

Selenium gained recognition among research scientists, regulatory authorities, and fisheries managers in the late 1970's when the landmark pollution episode took place at Belews Lake, North Carolina. Selenium released in the waste from a coal-fired power plant entered the lake, killed the fish community, and caused residual impacts for many years after selenium inputs were stopped (Cumbie and Van Horn 1978; Lemly 1985a, 1997a, 2002a). The primary lessons learned from Belews Lake were: (1) Even small increases in waterborne selenium can lead to devastating effects on aquatic life, and (2) Once selenium bioaccumulation in the aquatic food chain begins it is too late to intervene — pre-pollution assessment and management are key to preventing impacts. The lessons from Belews Lake were instrumental in the development of USEPA's current national freshwater criterion for selenium (5 µg/L [micrograms per liter]). Since the Belews Lake episode, a tremendous amount of research on the toxicology, environmental cycling, and hazard assessment of selenium has taken place (e.g., Frankenberger and Engberg 1998, Lemly 2002b). In addition to learning about its toxic potential, much information has been gained on the sources of selenium and how it reaches the aquatic environment, particularly with respect to coal mining and the coal industry (Lemly 1985b, 2004, Dreher and Finkelman 1992, Vance et al. 1998).

Need for Pre-Mine Assessment

The lessons from Belews Lake, supported by over two decades of research findings from many other locations throughout North America (Lemly 1997b, 1999, 2002b; Skorupa 1998a, Hamilton 2004), underscores the need to take a preventive approach to selenium pollution rather than attempting to deal with it after contamination has taken place. With respect to coal mining this means pre-mine assessment. Failure to adopt this approach can only worsen the selenium pollution and associated ecological risks that have emerged in West Virginia. Selenium-related violations of the federal Clean Water Act need not occur if careful pre-mine assessment is used to guide mine permit decisions. Clearly, much attention is focused on management and regulatory authorities in the state, and it is imperative that environmentally sound actions be taken in order to stem the escalating threat of widespread selenium pollution. Using pre-mine evaluation can safeguard natural resources by allowing site-specific risk assessment and risk management to take place. This is the prudent, environmentally responsible course of action.

Adopting this approach will benefit the state and the mining industry by demonstrating that all activities are being developed and implemented with the goal of preventing selenium pollution, thereby minimizing water quality issues that may lead to litigation by federal agencies and conservation groups.

Recommended Procedure

Geological assessment is the first step to understanding the environmental risk of selenium at prospective coal mines. It is essential to determine selenium concentrations of coal and overburden that are to be moved because once these materials are exposed to air and precipitation they can leach substantial quantities of selenium (e.g., Davis and Boegly 1981, Heaton et al. 1982), which begins the mobilization process and threat to aquatic life. Because selenium concentrations vary widely in coal and waste rock at a mine site (e.g., Heaton and Wagner 1983, Desborough et al. 1999), a thorough representation of the geographic area and depth of disturbance must be made. This entails making a minimum of one core drilling per 5 acres, extending into the coal bed that is to be extracted. Two samples (about 450 grams each) are taken from each core: one consisting of overburden material and one of the coal itself. Each sample is evaluated using a passive leaching test (see Heaton et al. 1982, Desborough et al. 1999). The first step is to crush the coarse sample with a hammer to produce approximately pea-size or smaller material. The resultant material is mixed and some is put into a beaker with deionized water (pH 5.0-6.0) in a ratio of 1 part sample to 20 parts water (use 5-20 grams of sample and 100-400 milliliters of water). Let stand for 48 hours, decant and filter (0.45 micrometer mesh) the liquid, acidify it to pH <2.0, and analyze the liquid for selenium concentration using a method with a detection limit <1 µg/L (part-per-billion). The results of these tests will generate a spatial profile of selenium mobility at the prospective mine site and allow a screening-level evaluation of hazards to aquatic life that can be used to guide subsequent assessment and regulatory decisions.

Evaluating Selenium Concentrations

The traditional approach to evaluate waterborne selenium concentrations is to compare them to the USEPA national freshwater criterion (5 µg/L). Concentrations exceeding the criterion should be viewed as posing unacceptable risk to aquatic life because of the likelihood

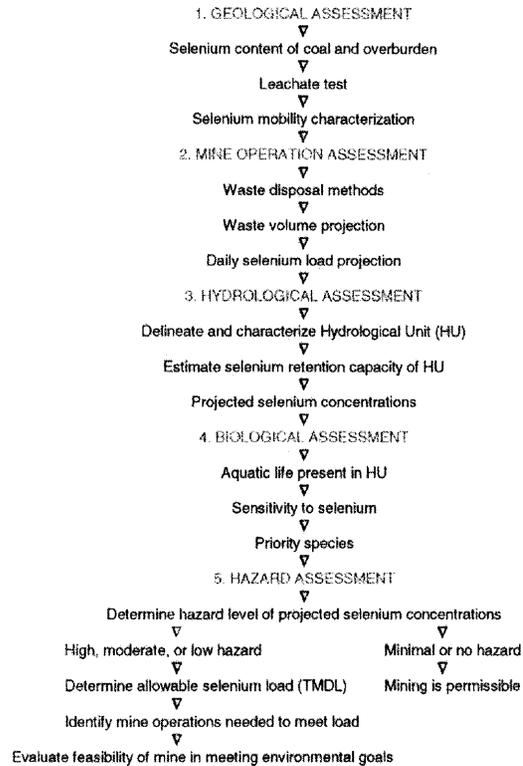
of bioaccumulation in the food chain. However, there is a growing body of scientific information which indicates that toxic impacts to aquatic life can occur when selenium levels reach 2 µg/L, particularly if the selenium is predominantly in the selenite form (which is the case for coal mine selenium), and the contaminated water enters a wetland, pond, reservoir, or other impoundment (Frankenberger and Engberg 1998, Skorupa 1998a, Hamilton and Lemly 1999, Lemly 2002b). Because of these findings, a value of 2 µg/L has been recommended by several selenium experts as the concentration limit necessary to protect fish and wildlife (Peterson and Nebeker 1992, Maier and Knight 1994, Skorupa 1998b, Hamilton and Lemly 1999, Lemly 2002b, Hamilton 2004), and USEPA has begun a review/revision process for their national freshwater criterion (USEPA 1998, Hamilton 2003). Moreover, based on broad experience dealing with a variety of selenium contamination issues, including coal mining wastes, the U.S. Fish and Wildlife Service and a number of state water quality agencies have adopted a value of 2 µg/L as their management or regulatory standard (see Engberg et al. 1998, Skorupa 1998b, Hamilton and Lemly 1999). I recommend that 2 µg/L be adopted as the maximum acceptable concentration of selenium in wastewater, drainage, and leachate associated with coal mining activities in West Virginia.

Comprehensive Assessment

By examining the results of the leach tests and applying a 2 µg Se/L water quality objective, field sites whose disturbance by mining would pose a hazard to aquatic life can be quickly identified. If clear dangers are evident — i.e., leachate selenium concentrations exceed 2 µg/L — then it is desirable to examine the operational characteristics of the proposed mine in the context of a 5-step comprehensive assessment that includes provisions for altering mine operations, establishing TMDLs for discharges and, in one scenario, not permitting the proposed mine to be developed at all (see page 5). This approach will allow site-specific hazard evaluation based on local hydrology and biological conditions, and provide a precise fine-tuning of the screening-level assessment generated by the leach tests. The methods used for hydrological, biological, and hazard assessment are techniques that have been field tested and published in the peer-reviewed literature (Lemly 2002b). Technical guidance is available for those unfamiliar with specific components of the procedure (email contact: dlemly@vt.edu).

Comprehensive assessment will provide the information necessary for policy makers to reach environmentally sound, scientifically defensible decisions on mine permit applications.

PRE-MINE ASSESSMENT OF SELENIUM HAZARDS



Environmental goals met
Mining is permissible

Goals not met
Mining is not permissible

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